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A WEEKLY JOURNAL.

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- The Pharmaceutical Society of Ireland.
- South African Pharmaceutical Association.
- The Midland Pharmaceutical Association of New Zealand.
- The Central Association of New Zealand.
- Otago Pharmaceutical Association.
- The Pharmaceutical Society of Queensland.
- The Pharmaceutical Society of South Australia.
- Tasmanian Pharmaceutical Society.

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POST-CARD COMPETITION.

WE invite anecdotes of personal experiences in connection with pharmaceutical life, to be told on post-cards, and we offer

ONE GUINEA FOR THE BEST.

The anecdote may be anything which has occurred in connection with the business; it must be original, and must be told crisply, and it must be in our possession not later than Monday, January 23, so as to be in time for our Winter Issue. Contributors who do not wish their names to appear unless they take the prize should add a *nom de plume*, which will be used.

DIARY COUPONS.

THE competition for the editor's prizes of 10% in value closes for subscribers in the United Kingdom on December 31, but, as in previous competitions, we shall accept any properly filled coupons which bear that *postal date*. Any who intend to compete should therefore return their coupons not later than Saturday.

Summary.

THE present number completes Vol. XLI., and includes title-page and index.

WE report a number of cases of carbolic-acid poisoning accidental and intentional.

PASTEUR has been honoured by his admirers on the occasion of his seventieth birthday.

AN Aberdeen firm of wholesale druggists have been fined in respect to unstamped weights.

THE Newark chemist whose wife eloped has relented, and she, with her young man, has been discharged.

IT is proposed to make the new Glasgow Pharmaceutical Association include the West of Scotland generally.

MR. S. M. BURROUGHS has offered 1,000% as a Christmas gift to Dartford for the purpose of founding a cottage hospital there.

A NUMBER of highly-commendatory reviews of our book on "Pharmacy Law" have recently appeared, and we quote from some of them.

WE give a reproduction of the Conference Killin group which contains portraits of many of the leading British pharmacists. A key accompanies it.

A SOMEWHAT varied stock of druggists' goods was brought under the hammer at Bournemouth last week, and the sale gave rise to many amusing incidents.

AS far as our space and the interest of events have allowed, we review the year 1892 from its commercial, educational, legal, and technical relations to the drug-trade.

THE editor of *Le Temps*, after an interview with representative Parisian pharmacists, has published an ample contradiction to the statements that druggists' profits are abnormally large.

FOR the benefit of those mainly who have difficulty in following the chemical transformations which result in the production of synthetic remedies, we print an exhaustive explanatory article.

WE give a full report of the proceedings at Glasgow taken by the Inland Revenue authorities against Mr. M. F. Thompson, homœopathic chemist, who was fined 70% for selling unstamped proprietary medicines.

TWO grocers have been fined for selling tincture of rhubarb innocent of saffron. The wholesale house who supplied one say that the R.F. does not say whether "cake saffron," or "hay saffron" should be used, and they had used the former for fifty-six years.

A WIGAN chemist has sued the mother of an apprentice for breach of the indentures. The case elicited interesting evidence as to an apprentice's duties, and whether the bottling of wines can be considered a pharmaceutical matter. In the result the chemist won, the jury holding that the apprentice had wilfully absented himself.

CIRCULARS TO THE TRADE.

On January 28, 1893, we shall give advertisers an opportunity for distributing circulars to the trade in the most effective and profitable manner known—viz., by stitching them up in

OUR WINTER ISSUE.

This number of THE CHEMIST AND DRUGGIST will present all the attractiveness which has characterised and made previous issues so popular. The publisher is now booking orders for the insertion of circulars, and he will furnish particulars and terms on application. It is none too soon to begin preparing circulars. The close of the year will show what branches of business it is desirable to push in the spring, and the start cannot be given better than by a business-like circular. The repeat-orders which we receive, and the new business which our advertisers have drawn from all parts of the world, are the best evidence of the sterling value of the circulation which we provide.

English News.

Carbolic-acid Poisoning.

An inquest was held at Ullesthorpe on Thursday, December 22, regarding the death of Clara Liggins, aged 55, the wife of a railway labourer. The evidence of deceased's husband and daughter showed that she had been of weak mind for some time past, and Mr. Hutchinson was of opinion that death was due to carbolic-acid poisoning. The only carbolic acid in the house was some left by the sanitary inspector ten years ago, and it was this deceased had taken—in mistake for medicine, said the jury.

Robert Whalley Munro, 33 years of age, committed suicide in Liverpool by drinking carbolic acid. This happened on Wednesday of last week. He bought the acid from a chemist in the morning, saying it was to be used for disinfecting purposes. It was supplied in a ginger-beer bottle labelled "Poison." Deceased had previously been locked up for attempting to commit suicide with landanum.

Naomi Gibbs, aged 33, wife of a fireman at East Ham, drank a quantity of carbolic acid last week, and died.

Dinah Weeden, aged 55 years, widow of a microscope-maker, who lived at Clerkenwell, took too much rum on Christmas Eve, and was found dead in bed next morning. During the night she had got up, and, thinking the carbolic acid was rum, had taken a considerable quantity from a supply which the sanitary authorities had left.

Charge of Offering Poisoned Grain.

At the Bury Petty Sessions on Thursday, December 22, Arthur John Alsop, chemical agent, of Lakenheath, was charged with having offered for sale on December 14, at Bury St. Edmunds, certain grain which had been steeped or dipped in poison, or with which poison had been mixed so as to render the same poisonous. As defendant was suffering from bronchitis, the case was adjourned.

They Liked Cachous.

Two boys belonging to Bradford—Dominic Spelman and William Smith, each 15 years of age—got fourteen days' imprisonment at Beverley last week for stealing a bottle of cachous from the shop of Mr. Edwin Pottage, chemist, of Fleming Gate Beverley.

Fires.]

There was a fire on Wednesday of last week at Beck Hill Chemical-works, Shelf, belonging to Mr. Thomas Johnson. There was about 60 tons of pic on the premises, and the fire is supposed to have originated from this. Before the flames were got under damage to the extent of 600*l.* was done, and there is no insurance to meet this.

The shop of Mr. Wyles, chemist, 9 Camperdown Terrace, Yarmouth, has been damaged through a chimney taking fire.

Sequel to the Neill Case.

Mr. Robert Graham, L.S.A., of 56 Upper Kennington Lane, who gave a certificate of the death of Matilda Olover, who was poisoned by Neill, is being prosecuted by the Treasury for "unlawfully and wilfully making a false certificate of death." The case was opened before Sir John Bridge, at Bow Street, last Friday, and at present stands adjourned.

The Kimberley Exhibition.

We are advised that the following firms have gained gold medals at the exhibition recently held at Kimberley:—Idris & Co., London, for mineral waters; the Viking Food and Essence Company, for turtle-soup and essence of beef; George Haynes & Co., Stockport, for medicated cotton-wools.

The Liquor Carnis Company (Limited).

The interest-warrants for the current year on debenture bonds of the Liquor Carnis Company (Limited), at the rate of 7 per cent., will be payable at the company's bankers, the City Bank, Holborn Branch, on and after January 20, 1893. Mr. Wm. Shepperson has been reappointed managing director of the company for a second term of three years from January 1, 1893.

The Elopement.

Alexander Powesland, 26, and Beatrice May Millward, 30, the wife of a chemist, were brought up on remand at North London Police Court, last Saturday, charged with having been concerned together in stealing money and property to the value of 200*l.* belonging to Mr. Millward. The facts were mentioned last week. On the case being called Mr. C. V. Yonng, who represented the prisoners, said that since the last hearing there had been a change of feeling on the part of the prosecutor towards his wife, and Mr. Millward went into the witness-box and said he wished to withdraw. Powesland's father was called and he said he would undertake to send his son out of the country. Mr. Mead said he was willing to allow the proceedings to be stopped, but he could not allow the case to be altogether withdrawn from the court. He should remand Powesland for twenty-eight days on his father's bail in 20*l.*, on the understanding that if he had in the meantime left the country the father only need appear. Mrs. Millward, would be released on her husband's bail in 10*l.* to come up for judgment if called upon. Mr. Millward, who looked very careworn, went to the entrance of the dock to assist his wife into the gaoler's room to have her recognisances taken, but she allowed the gaoler to hand her down, and passed through the prisoner's door without taking her husband's proffered hand.

Gas and Water.

At the Westminster Police Court on Saturday, George Long Cobden, described as Chairman of the Gas and Water League, was charged with obtaining a shilling by false pretences from Mr. Sidney Klosz, chemist, of 19 King's Road, Chelsea. Prisoner got Mr. Klosz's signature to a petition, and a shilling as a subscription. There being a doubt about his *bona fides* the police had made inquiries, hence the prosecution. Mr. De Rintzen remanded him for a week on his own recognisances.

Drug-contracts.

At the last meeting of the St. George's East Board of Guardians the tender of Messrs. Willows, Francis & Butler for the supply of drugs, &c., for the ensuing twelve months was accepted, and that of Messrs. S. Maw, Son & Thompson for medical and surgical appliances for the same period.

Messrs. Butler Bros., High Wycombe, Bucks, are to supply quinine (in original 1-oz. bottles) and cod-liver oil (in quart bottles) to the High Wycombe Union for the ensuing quarter.

Messrs. Bradley & Bliss, of Reading, have submitted a tender to the Board of Guardians for the supply of drugs, and it was referred to Mr. Hayward for consideration.

On Thursday of last week, at a meeting of the Manchester Board of Guardians, some conversation took place with reference to a contract for the supply of drugs which has been entered into between the Board and Messrs. James Woolley, Sons & Co. The firm, it was stated, had contracted to supply, amongst other things, methylated spirit, and the dispenser at the workhouse now wrote to say that Messrs. Woolley could not supply the required quantity of methylated spirit, as if they did so they would be liable to a prosecution at the hands of the Excise authorities. Surprise was expressed that they should have contracted to supply the spirit if they could not legally do so. It was argued that Mr. Guest, a member of the Board, should endeavour to make arrangements by which the difficulty could be overcome. In reply to a question, it was stated that the prices at which the drugs were being supplied under the contract were much lower than last year, but that Messrs. Woolley declined to allow 5 per cent. discount for goods supplied outside the contract. They had been written to and asked to do so, but had replied that the prices were net.

Munificent Offer from Mr. S. M. Burroughs.

Through Mr. A. Searl, F.C.S., Mr. S. M. Burroughs, of the firm of Burroughs, Wellcome & Co., Phoenix Mills, Dartford, who is now at Turin, has made known that he is willing to give 1,000*l.* as a Christmas gift for the purpose of establishing a cottage hospital at Dartford, and he has placed in Mr. Searl's hands an order on the firm for the amount stated. The offer is made under certain conditions, the principal one being that enough money be subscribed to build a really

"up-to-date" hospital, and Mr. Burroughs expresses the hope that a suitable site may be given, with sufficient ground for the health and pleasure of convalescent patients. In furtherance of the scheme Mr. H. M. Stanley has consented to give a lecture, and a public meeting will be shortly held to discuss Mr. Burroughs's offer. Mr. Burroughs is President of the Dartford Liberal and Radical Club, and some time ago started monthly social gatherings of the firm's workpeople. Curiously enough, these gatherings are held in the Conservative Hall at Dartford. Quite recently the firm made the offer of sufficient land for a public recreation-ground at Dartford.

The Widnes Chemical Trade.

The Widnes people do not look upon the Alkali Union with a favourable eye. The formation of that syndicate was not only the cause of the immediate and permanent departure from the town of the manufacturers themselves, but three or four works were entirely stopped, and in others considerable portions of the plant were allowed to remain idle. During the past month or two men have been "stopped" in large numbers at some of the works, and now there is another cause for grave disquietude. In consequence of the high price of caustic soda in the market the papermakers and soapmakers are using as little of it as possible, utilising in its place the much cheaper product of "carbonated ash." For the past eight or nine months caustic soda has been, in more senses than one, a "drug" in the market, and the works have been accumulating stocks. One works, which formerly supplied one celebrated firm of soapmakers with about 50 or 60 tons of caustic soda weekly, have not had an order from that firm for some time—a fact which generally illustrates the condition of the caustic-soda trade. Mr. W. M. Sowerby, manager of the Runcorn Alkali-works, has been appointed manager of Mathieson's Works at Widnes. The latter works are amongst the finest controlled by the syndicate, having cost them little short of a third of a million of money, and the managerial appointment to them is considered one of the "plums" in the gift of the United Alkali Company.

A Drug store Auction at Bournemouth.

A crop of coroner's inquests may be expected in East Bournemouth. On Friday last the inhabitants of this picturesque quarter were regaled with the unwonted spectacle of a druggist's stock (the Botanic Drug-supply Stores) being disposed of under the hammer. The stock-in-trade was put up in lots to suit purchasers, and everything was sold from the carboys in the window to the wrapping-paper and pills, and much merriment was evoked at the mention of many of the lots, which included the conventional "liver-mixtures," gripe-waters, and "fever-drinks," besides a huge stock of well-known patents. Indeed, many prominent patent-medicine men owe a debt of gratitude to this unfortunate druggist, who had evidently bought not wisely but too extensively, for the excellent advertisement which their wares received at the hands of the auctioneer. The supply of such articles as "Puriline," which sold in cards of a dozen at 2s.; "Mona Bouquet" in original dozen packets at 3s. and 4s.; Hardeman's "London Beetle-powder," 1s. packets at 1s. 6d. per dozen; Stern's Pumiline preparations, and other well-known goods, seemed well-nigh inexhaustible. Messrs. Rimmel, the perfumers, also contributed largely to swell the auctioneer's returns, their elegantly got-up scent-decanter finding ready purchasers in lots of $\frac{1}{4}$ -dozen and $\frac{1}{2}$ -dozen at prices far below the wholesale value. It was murmured amongst the audience that Messrs. Rimmel's goods were only just unpacked, having been received but the day previous to the sale. The auctioneer's attempts to pronounce "podophyllin" when he came to a "special" homoeopathic preparation of that drug were very funny, and caused abundant laughter; but the East Bournemouthians evidently esteemed the remedy lightly, for several successive dozens of the 13½d. size were knocked down at 1s. 6d. per dozen. Such items as "Now, what may I be allowed to say for this half-dozen of diarrhoea-mixture?" provoked much hilarity, as did also the reading of the labels on the various "lots" by the auctioneer's man. One unsophisticated individual bid as high as 3s. 6d. for a No. 1 packet of Southall's sanitary towels, under the impression that he was securing a dozen of the familiar lavatory article. It may be safely asserted that never before in the

history of the town has so much physic been turned loose amongst its inhabitants, and the "legitimate trade" may expect to feel the effects for a long time to come. The auctioneer remarked that in his business career of twenty-two years he had never before "sold up" a druggist, so that the trade can't be in such a bad way after all.

Irish News.

Belfast Items.

Mr. John B. Hay, M.P.S.I., late of Messrs. Barron, Harveys & Co., London, has purchased the Windsor Medical Hall, lately owned by Dr. McKinney. He is introducing some English ideas into Belfast trade.

Professor Whitla, M.D., will hold an examination for registered druggists on January 19, 1893, at Queen's College, Belfast.

Regret is felt amongst the trade that Belfast students cannot have the advantage of the lectures delivered by Professor Tichborne in Dublin, and it is reported that he is likely to be asked to deliver one here at no distant date.

CO₂.

A ton of carbonic-acid gas is said to be used in Dublin every week for the manufacture of aerated waters.

How to Become a Pharmaceutical Chemist in Three Months.

An application was recently made to the Pharmacy Board of New South Wales by a gentleman lately from Dublin, asking to be placed on the Register of Pharmaceutical Chemists, and presenting an "assistant's" certificate from the Apothecaries' Hall, Dublin. The application was declined, and the secretary was instructed to make inquiries of the Apothecaries' Hall, Dublin, whether an assistant's certificate entitles the holder to membership. The reply will doubtless be interesting.

The Sligo Prosecutions

for the sale of "Fellows's syrup" by grocers have been held over for the Christmas holidays, and will come on for hearing on Monday, January 2, 1893.

Moving.

Mr. Donovan, pharmaceutical chemist, of Blackrock, co-Dublin, who lately disposed of his dispensing and drug establishment, has emigrated with his family to Australia.

Mr. J. H. Graham, pharmaceutical chemist, son of the late proprietor of the Medical Hall, Westmoreland Street, Dublin, is about leaving Dublin for Cape Town, where he has secured a lucrative appointment.

Scotch News.

The Partick Slander.

Dr. Edward Coyle, of Partick, who was ordered by a Court-of-session jury a few weeks ago to pay damages of 65*l.* to a midwife, for stating that she had killed a patient with ergot, applied for a new trial on Saturday, and the Court granted it on the ground that the verdict had been contrary to the evidence, there having been no adequate proof of malice and want of probable cause on the part of the defender.

Raid on Light Weights.

In the Aberdeen Police Court last week, Andrew Collie, cashier in the employment of William Sinclair & Co., wholesale druggists, Upperkirkgate, was charged with having used, or had in his possession for trade purposes, three weights that were unjust, and five weights that had not been verified and stamped by the inspector of weights and measures. The accused pleaded guilty, and was ordered to pay 2*l.* expenses or go to prison for three days.

A Chemist's Assistant Drowned.

On Tuesday the dead body of a man was discovered lying half in a ditch in the Craigentenny Meadows at Portobello. The corpse was frozen into the mud so firmly that it had to be dug out by means of a pickaxe. It has been identified as the body of James Mackenzie, aged 33, druggist's assistant, Leith, who had been missing since December 16. The man appeared to have been drowned.

The Edinburgh Pharmacy Athletic Club

opened a club-room and gymnasium last week at 79 Leith Street, and it is already being largely taken advantage of. Instruction is given nightly in boxing, Indian clubs, single-stick, rings, &c. Papers and magazines, as well as chess and similar things, are provided for the use of members.

Edinburgh Pharmacy Students

held their fifth annual supper on Friday, December 23, in the Albert Hotel. The company numbered between sixty and seventy. Mr. Wm. Duncan presided, and Messrs. A. G. Hendry and W. G. Mackenzie acted as croupiers. The guests included Messrs. J. Laidlaw Ewing, J. B. Stephenson, Adam Gibson, Peter Boa, D. McLaren, and Rutherford Hill. In the programme the musical element largely predominated. The toasts of "The Pharmaceutical Society" and "The Board of Examiners" were given by the Chairman, and responded to by Mr. Ewing and Mr. Stephenson respectively; and Mr. Rutherford Hill proposed "The Ladies," replied for by Mr. McLaren, who also proposed "The Chairman and Croupiers." It was a very enjoyable evening.

French Pharmaceutical News.

(From our Paris Correspondent.)

AN INVENTION IN PHOTOGRAPHY.—The Duc de Morny, an amateur photographer, has communicated to the French Department of War particulars of an invention he has made, and which enables any kind of paper, no matter what its colour or texture, to be used for photographic purposes. By his system it is possible to obtain eighty copies of a photograph per minute.

CITRIC ACID AS A WATER-PURIFIER.—The well-known chemist M. Girard, chief of the Paris Municipal Laboratory, has lately been engaged in making researches concerning the bacilli of cholera and typhoid fever; in so doing he has once more proved the effects of acids in destroying microbes. He finds citric acid to be the most useful and powerful of all. One gramme, he says, added to a quart of tainted water, will effectively destroy all the microbes that may be in it. Consequently he recommends the use of natural lemonade as an excellent beverage at all times, and especially during epidemics. If necessary, a little bicarbonate of soda can be added as a means of neutralising the acidity of the lemon.

THE "CUTTING" TROUBLE IN PARIS.—The promise made by M. Planchon at the mass meeting of students of pharmacy held on December 18, as reported in last week's CHEMIST AND DRUGGIST, has been rigidly carried out. The article in *Le Temps* aroused great indignation amongst the Paris pharmacists, and a deputation was appointed to interview the editor in order to authoritatively refute the allegations published last week. The task devolved on MM. Boquillon, Melville, and Schmidt, members of the Syndical Chamber of Pharmacy, they being also empowered to speak in the name of the Paris School of Pharmacy. The editor gave them a very patient hearing, and ultimately published a column and a half of matter showing conclusively that the right-minded members of the profession, who dispense medicines conscientiously, and in accordance with the French Codex, do not make a profit of more than 25 or 30 per cent., while specialities and such-like articles rarely realise more than 8 per cent. M. Melville, as President of the Syndical Chamber, was spokesman of the deputation, and he went carefully into details in a manner intelligible to the uninitiated, to show the various manipulations

that the articles mentioned by *Le Temps* have to undergo before they can be sold to the public.

FRENCH HOSPITAL PHARMACISTS.—The posts of hospital pharmacists, and especially those of head of the laboratory, or chief pharmacist, are much sought after by the more enterprising members of the profession in France. Here, as in England, there is a tendency to push pharmaceutical education above the needs of ordinary counter-work. A young and successful man, now professor at the Paris School of Pharmacy, remarked to the representative of THE CHEMIST AND DRUGGIST a few days ago that his ambition was to become chief pharmacist of a hospital, "because," he remarked, "although the emolument is merely nominal, one has the advantage of having a well-fitted laboratory at one's disposal, also a gratuitous supply of the best drugs and chemicals." He added, "the value is in the position itself, it invariably brings a well-paid connection amongst manufacturers for analytical and such-like work; besides which, some of the leading makers of pharmaceutical specialities like to have a well-known man in their regular service for controlling the manufacturing processes, and such posts are well paid." Beyond this there is also the fact that hospital pharmacists whose attainments, or influence, are not sufficiently great to secure them the position of "chief," find the title "formerly pharmacist at the Paris hospitals" of considerable service to them in after life. But, as a matter of fact, the course of training they go through, though theoretically of a high order, does not in practice amount to much.

HONOUR TO M. PASTEUR.—On Tuesday, December 27, all that is famous in French science, diplomacy, and politics assembled at the New Sorbonne, Paris, to celebrate the seventieth birthday of the great chemist and scientist, M. Louis Pasteur. The audience was a particularly distinguished and cosmopolitan one; it included the President of the Republic, his Excellency the Marquis of Dufferin and Ava, and other leading ambassadors accredited to France. English science was represented by Sir Joseph Lister, Sir Henry Roscoe, and Professor Ray Lankester. In opening the proceedings, M. Charles Dupuy, the Minister of Public Instruction, referred to the gathering as a scientific solemnity and a red-letter day alike for France and humanity. Addressing M. Pasteur, he referred to him as follows:—"Victorious to-day over hydrophobia; to-morrow, perhaps, over cholera! Henceforth the formula is definite and complete; your disciples give it in two words: Fermentation and virus are living beings, vaccine is an attenuated virus; medicine has for its basis the artificial attenuation of virus. Thus obtaining the remedy from the evil itself, the microbial medicine has been founded!" The Secretary of the Academy of Sciences, M. Bertrand, who is also a member of the Pasteur Institute Council, referred to Pasteur's numerous successful researches, and M. Daubie, also of the Institute, reminded the audience that it was as a mineralogist that M. Pasteur first attracted public attention. Sir Joseph Lister spoke on behalf of the English deputation, and many other addresses were delivered. On rising to reply, M. Pasteur was much affected by the emotion he evidently felt. He merely uttered a few words of thanks and then handed his son a written reply to read. In it reference was made to the advantages now enjoyed by those wishing to pursue scientific studies, as compared to when he was a young man. He spoke very appreciatively of the arrangements made for the ceremony, which tended to remind him of his past life. The deepest joy a man can feel, he said, was brought to him by the cosmopolitan nature of the audience. It taught him to believe that science and peace can triumph over ignorance and war. M. Pasteur was loudly cheered when his reply had been read, and as he left the Sorbonne he was the object of a popular manifestation. He afterwards held a reception at his own house.

Foreign and Colonial News.

THE TURKISH OPIUM MONOPOLY.—The Italian merchants of Smyrna are signing a petition addressed to the Italian Ambassador in Constantinople, in which they protest

against the proposed establishment of an opium monopoly. The signatories solicit the intervention of the Italian Ambassador in Constantinople to obtain from the Imperial Government the free exercise of a trade.

A PHARMACY NEARLY FIVE CENTURIES OLD.—The City-pharmacy in Schweinfurt, Germany, has just changed hands. This business dates from 1412, and is believed to be the oldest in the Empire. It was originally established by the city of Schweinfurt, which in the year named voted for the purpose 5,000 florins, an unprecedentedly large amount for those times. The first pharmacy in Germany was founded at Nuremberg in 1404.

PHARMACY IN GUATEMALA.—In this country pharmacists do not dispense, without a physician's prescription, any drugs except those in common use. Even on a prescription they must not dispense any poison in large dose without previously calling upon the physician and ascertaining that the prescription is written as intended. The same precaution must be taken when incompatibles are prescribed in mixture. Prescriptions written more than a week before being presented are not dispensed, and no druggist is allowed, without the prescriber's permission, to give a copy of any prescription. These are regulations made by statute.

DRUG-EXPORTS FROM TURKEY.—The following are the drug-exports from Turkey for the year ending February 28, 1892:—

	Kilos.	Piastres
Gum tragacanth ..	525,213	4,636,275
Mastic	73,583	3,569,396
Gall-nuts	1,951,133	10,367,433
Opium	430,185	70,348,126

1 kilo. = 2.20 lbs. 110 piastres = 1*l.* sterling.

MICRO-ORGANISMS IN MINERAL WATERS.—At the last meeting of the Berlin Pharmaceutical Society, Dr. Biedler read a paper on mineral waters, in the course of which he reported on the bacteriological examination of the more popular waters. By means of plate-cultures he obtained the following as the mean figures (representing 1 c.c. of the water), the samples being the ordinary bottles:—Hunyadi János, 6,615 and 4,460; Ems, 5,890 and 7,250; Carlsbad (Mühlbrunn), 27,216 and 3,890; Vichy (Grand Grille), 13,400 and 14,300; and Friedrichshall, 5,795 and 5,600. In regard to a sample of Vichy (Dutôisbrunnen), he found that in the natural state 385 was the number of micro-organisms, and twenty-four hours later the number had increased to 44,000. In a year-old water there were 16,000 organisms, and in a ten-year-old one 220 micro-organisms per c.c. These results are perhaps not surprising, but they are notable.

U.S.A. TRADE MARKS.—The following were registered at Washington on November 22:—"Luxe," for cosmetics and a liquid dentifrice, by E. G. Hake, New Cumberland, Pa.; "De Melos" over a shield device, for face and skin powder, by Van Dyk Manufacturing Company, Butherford, N.J.; "Lemon Juice" on a device, for complexion preparations, by Lida Wilbert, Chicago; "Delica," for white soap, by the Ohio Soap Company, Cincinnati; "Rose-water and Glycerine" on a device, for toilet soap, by the Oakley Soap and Perfumery Company, New York; figure of a bull, for a medicinal tonic, by Lott Mansfield, Boston, Mass.; diamond-shaped figure, for pile and dysentery preparation, by W. A. Winchester, Medford, Mass.; "Dr. von Peters' Liquid Sulphur," and the head of a devil, for a sulphur preparation, by Peters & Co. (Limited), Chicago; "Therapine," for proprietary preparations, by Albemarle Chemical Company, New York; "Alkalithia," for a remedy for rheumatism, &c., by Keasbey & Mattison, Ambler, Pa.; figure of the sun, for liver and kidney remedy, by Aron Klein, Hamilton, Ohio; "Flyene," for an insecticide, &c., by J. Rowbotham, Merchantville, N.J.; "Perloids" and "Eureka," for capsules filled with medicine, by John R. Planten, New York; "Fairline," for ointments, by W. Fairweather, Chicago; figure of an acorn and oak-leaf, with applicant's signature, for disinfectants, by J. M. Raymond, Paris, France; "James Cockle," and "Compound Antibilious Pills," on a round label, for pills, by James Cockle & Co., London, England.

Trade Notes.

MESSRS. IDRIS & Co. have removed to their new factories at Pratt Street, Camden Town.

THE VIKING FOOD AND ESSENCE Co. have removed to a new factory at 33 King's Road, St. Pancras.

FROM the beginning of 1893 the Pharmacie Goegg ("the Anglo-American Drug Store"), in Geneva, will be carried on exclusively by M. E. Magnin, the other partner, M. Protracski, having withdrawn.

THE DOROTHY DENTIFRICE which has been hitherto supplied in 3*d.* envelopes, is now put up in 6*d.* and 1*s.* metal boxes, a much more convenient form. The 3*d.* packets are still supplied.

MESSRS. MAY, ROBERTS & Co., 9 Clerkenwell Road, send us an advance copy of their half-yearly price-list, which we understand will be ready for circulation next week. It is a very comprehensive catalogue, covering all kinds of druggists' sundries and proprietary articles, all of which are quoted at net rates.

IT would seem that the district of Milli, in Sicily, where Messrs. W. J. Bush & Co.'s essential-oil works are situated, suffered severely from a storm on December 9. The factory alluded to was slightly damaged, but Messrs. Bush & Co. tell us that beyond a stoppage of work for a few hours while the storm was at its height, their business has not been interrupted.

THE SANITARY WOOD WOOL COMPANY (LIMITED) have manufactured from their wood-wool an excellent vaccination-pad. It is very light, absorbent, and antiseptic. It is supplied to sell retail in an envelope at 2*d.*, and has the great advantage that it will not be used a second time. The pad is composed of Hartmann's perchloride wood-wool wadding covered, except the part which is applied to the vesicle, with antiseptic gauze.

THE new plan to counteract cutting of Clarke's fairy and pyramid lights, which is advertised in this issue, well deserves the close attention of the trade. The manufacturers—Clarke's Pyramid and Fairy Light Co. (Limited), Cricklewood, N.W.—have fixed the minimum retail price at 8*d.* per box, and in each box they enclose a coupon. Consumers of the lights are to receive 3*d.* per dozen for these coupons from the dealer who sold them the lights, and the dealer, on returning the coupons to the manufacturers, will be paid for them at the rate of 1*s.* per dozen. If any dealer cuts the retail price below 8*d.* he forfeits his right to this allowance. The scheme provides a fair profit to dealers, gives consumers an interest in the lights which should be favourable to business, and merits, we think, an honest trial by the trade.

Legal Reports.

SAFFRONLESS TR. RHEI.

AT the Alfreton Petty Sessions on Friday, December 23, James Thorpe, grocer, of Loco Lane, Pilsley, and Ann Sims, grocer, Amber Row, Wessington, were charged with having sold tincture of rhubarb which was destitute of saffron, contrary to the Food and Drugs Act. In neither case was the charge denied, but it was admitted by Colonel Shortt, the inspector of weights and measures, that no doubt the tincture of rhubarb was in the same condition as when the defendants purchased it.

Dr. Barwise, the medical officer of the Derbyshire County Council, proved that according to the British Pharmacopoeia saffron should be one of the ingredients of tincture of rhubarb. It was a stimulant, and to take it out would make the medicine less palatable and not so acceptable to the eye. The cases had been brought forward as a warning to those who sold tincture of rhubarb.

Mrs. Sims explained that the drug had been sold to her by Greaves & Son, wholesale druggists, Chesterfield, who said

that the tincture was made up according to the Pharmacopœia, which does not say whether "cake" or "hay" saffron is to be used. They had for fifty-six years made it up with "cake" saffron.

Mr. Thorpe was fined 1s. and costs, amounting altogether to 11s. 6d., and Mrs. Sims 1s. and 9s. 6d. costs.

INLAND REVENUE PROSECUTION—SELLING UNSTAMPED PATENT MEDICINES.

A BRIEF report appeared in our last issue of a prosecution by the Inland Revenue authorities in Glasgow, on December 22, of Mark Fogget Thompson, homœopathic chemist, Gordon Street and New City Road, Glasgow, for selling on fourteen different occasions within the last three months medicines liable to duty, but which had not the necessary Excise stamps affixed to their labels.

Mr. Thompson, who was defended by Mr. A. Orr Deas, advocate, pleaded guilty to all the fourteen counts in the indictment. Mr. Deas stated on his behalf that Mr. Thompson had carried on business as a homœopathic chemist in Glasgow for many years, and had gained the esteem of a large *clientèle*. He was the patentee of a number of medicines, which he had for many years been in the habit of giving away to dispensaries and hospitals, and also to clergymen who worked among the poorer classes. With one exception, all the fourteen articles were medicines which Mr. Thompson himself manufactured. The one which was not of Mr. Thompson's preparation was Count Mattei's "Anti-scrofoloso." That was imported direct from Italy, and Mr. Thompson, acting under a wrong impression, believed it was unnecessary on that account that they should have the Inland Revenue stamp. Mr. Thompson had three shops in Glasgow and one in Edinburgh, and he had besides a factory where he made a preparation of kola. It was impossible with so large a business to look after that Mr. Thompson could always be at hand to see that his assistants were attending properly to their duties, and were not selling what was only meant for donations or samples. Of course, Mr. Thompson was responsible for his assistants in law, but he extremely regretted that he had thus unintentionally broken the law. He respectfully submitted that their Honours might, under the circumstances, reduce the penalty.

Mr. Threshie, who prosecuted for the Inland Revenue, said his information was that in the course of forty-one purchases made in Mr. Thompson's three shops only three of the medicines had the Government stamp on them. Before this prosecution was raised, ten complaints were made to Mr. Thompson by the officers of the Inland Revenue, so that he was not in ignorance of what went on in his shops. Those cases were compromised, and he promised not to repeat the offence. He had repeated the offence, and the Inland Revenue felt themselves compelled to prosecute.

Mr. Deas: I object to this being stated. I was unaware that any previous complaint had been made.

Mr. Threshie: I am answering your statement that he was in ignorance of what was being done.

Mr. Gray (Assessor): What is the penalty?

Mr. Threshie: 10*l.* for each offence, with the alternative of two months' imprisonment.

The Magistrates imposed a penalty of 5*l.* for each offence—or 70*l.* in all—with the alternative of one month's imprisonment.

THE "LION" PILLS, &c.

IN our report of the case *Deacon v. Burgess* last week, Mr. Renshaw, who appeared for the defendant, E. Burgess, jun., is made to say at the end of his speech that "defendant had come into court without a case." Of course it was the plaintiff that he alleged had no case.

THE DUTIES OF APPRENTICES.

AT the Wigan County Court last week, before his Honour Judge Jones and jury, William Worsley, chemist and druggist, Market Place, brought an action against Mrs. Alice Haydock, of Abram, for the recovery of 25*l.* as damages sustained by a breach of indenture of apprenticeship by her son, William Henry Haydock. There was a counter-claim for 25*l.* set up by the defendant, as damages

sustained by the defendant's son not being properly taught the trade of a chemist and druggist. Mr. A. G. Steele appeared for the plaintiff, and the defendant was represented by Mr. Bradbury.

Mr. Worsley, in evidence, stated that William H. Haydock was indentured to him as an apprentice in 1887, and towards the end of 1888 he complained about some work which he had had to do in the absence of the errand-boy. Mrs. Haydock at that time came to see him, and said her son was dissatisfied with the business and with the wages, to which plaintiff replied that the lad had been a great deal of trouble to him, but he agreed to give him 5*s.* a week more. The lad then returned to his duties, and he worked in the warehouse at bottling, packing, &c. (duties which he preferred), for twelve months. In September, 1890, he went away for his holidays and did not return. In October, Mrs. Haydock came to Mr. Worsley, and at his suggestion she accompanied him to the office of Mr. J. Graham, his solicitor, in order to come to some terms. There she acknowledged that her son had done wrong in staying away without leave, but she added that he still did not like the business and was anxious to leave. She offered the plaintiff 25*l.* if he would release her son from his indentures, and plaintiff agreed. She promised to come to the office next day and pay the money, but she did not come, and the money had never been paid.

The cross-examination of the plaintiff was directed to show that his solicitor had written a letter to defendant threatening her son with imprisonment. Mr. Worsley maintained that he did not so instruct his solicitor, but that he could write "anything he liked." He admitted that he had a small oil and paint business in common with other chemists and druggists, also that he had a wine-licence to sell port, sherry, champagne, and claret as well as medicated wines, and he considered it young Haydock's duty to learn that part of the business. He denied that the lad was bottling wines in the cellar for weeks together—it would not be more than a week during the whole year. The lad did not try to learn the business. A chemist's apprentice was not allowed to dispense prescriptions until the last year of his apprenticeship. It was true that the day he returned after eight months' absence he ordered Haydock to clean the window. He considered that part of an apprentice's duties, and had done it himself for three years. Haydock had assisted in taking in a load of coals, but not on his (plaintiff's) instructions. It was the case that his younger brother was put behind the counter.

J. H. Gerrard, late assistant to plaintiff, corroborated. In cross-examination, he admitted that he thought it scarcely fair that the plaintiff's brother should have been placed over Haydock, who worked in the warehouse and cellar of his own free will.

Joseph Worsley, brother to the plaintiff, said the defendant told him distinctly that he did not care for the business, and that he would run away to America when he had an opportunity. Haydock was treated in the same way as the other apprentices. There were a dozen or fifteen chemists in Wigan, and four or five sold wines.

Robert Worsley, plaintiff's father, stated that he heard Mrs. Haydock ask that her son should be released from his apprenticeship.

Mr. Alderman Phillips (Mayor of Wigan) said he was a chemist and druggist. A third of the chemists and druggists in Wigan had wine licences. When he was an apprentice there were several shops where wines were sold.

His Honour: What is the custom in Wigan?—I know several of the chemists in Wigan have wine licences to sell medicated wines, and it has developed into a full wine business.

Mr. Steel: Now with regard to the duties of apprentices, can you tell me what those duties would be during the first three years?—The duties are general. In some shops no errand-boy is kept, and the apprentices have to make themselves generally useful. All my apprentices have cleaned windows, and have done other cleaning in emergencies; but if a youth gets on as he should do he makes himself too useful in other ways to be employed in cleaning.

Mr. Bradbury: Have you a large business?—Yes.

Do you sell everything that chemists sell in the ordinary way?—Yes.

Do you sell unmedicated wines?—No.

And I suppose it is a fact that some chemists have added to their ordinary business the sale of unmedicated wines?—Well, you see, they must have a wine licence to allow them to sell such wines as beef-wine, malt, coca, &c., and the custom of selling other wines by chemists has become very common. For a very long time British wines have been sold under the "sweets" licence.

But a "sweets" licence does not qualify for the sale of port, sherry, and that class of wines, does it?—I am not quite clear about that.

The Registrar (Mr. E. H. Woodcock): Yes, it does.

Mr. Bradbury: Very well; I will accept the Registrar's evidence. (Laughter.) But I suppose the principal chemists in Wigan do not sell wines?

Witness: Three or four of them, all with large businesses, sell unmedicated wines.

His Honour: I should like a clear expression from the witness on this point. Do you consider the sale of unmedicated wines to be part of the business of a chemist?

The Mayor: I cannot say that I do, more than I consider the sale of tea to be such.

Mr. Bradbury: Or Pears' soap. (Laughter.)

His Honour: Just so.

Thomas Johnson, chemist and druggist, Market Place, said unmedicated wines were sold by chemists in Wigan thirty years ago. There were now about four chemists who sold them.

Mr. J. H. Atherton, chemist and druggist, Market Street, corroborated.

Mr. Graham, solicitor, Wigan, was then examined as to the letter which he had sent to Mrs. Haydock, and he corroborated Mr. Worsley's evidence as to the interview with her.

Mr. Bradbury, in cross-examination, asked witness by what authority an apprentice can be put in prison. Could he produce any?—Yes; an apprentice can be brought before the magistrates for a breach of his indentures.

What! an apprentice to a chemist and druggist?—Well, that is a point.

It is no point at all. Don't you know that, except in the case of an artisan apprentice, there is no power in the land to imprison an apprentice for absenting himself?—I do know that now. (Laughter.)

Don't you know that Stone tells you clearly that it is not possible to send a chemist's apprentice to prison for absenting himself?—I had written the letters before I read Stone. (Laughter.)

Mr. Bradbury then addressed the Court on behalf of defendant, and called

William Henry Haydock, who said that when he went to the plaintiff's he knew nothing about the paint warehouse. Mr. Worsley said he had a senior apprentice who would teach defendant, but defendant never saw that apprentice. A little later on Gerrard came, and defendant was put in the back shop, the warehouse, and the cellar, packing empties, receiving empty bottles, stocking paint, colours and pitch, and doing other things. He had no other work to do. Mr. Worsley used to write down on a slate the work allotted to his assistants. Defendant never had a chance to go behind the counter, whether he wanted to or not. Mr. Worsley was away from the shop a great deal, and he employed in succession a number of managers who did not possess certificates. Defendant spent quite half of his time in the warehouse. He wanted to learn the business, and it was only when he found that he was being neglected that he began to dislike the place. He told Mr. Worsley that he did not see how he could learn the business while he was bottling wine, and the plaintiff replied that if he did not do as he was told he would take legal proceedings.

By Mr. Steel: From 1887 to the end of 1889 there was no wine to bottle, as the wine business was only started at the end of that time.

Mrs. Haydock then gave evidence, and after Mr. Steel had addressed the Court,

His Honour, in summing up, said there had been no evidence to show whether the mixing and selling of oils and paints constituted a part of the business of a chemist and druggist, and the jury would have to satisfy themselves as to whether by refusing to do this work the defendant had disobeyed the lawful orders of his master. As to the sale of wine, it seemed to His Honour, from the evidence given on the point, that the sale of unmedicated wines could not be

considered a part of the business of a chemist and druggist. If so, it could scarcely be considered a breach of the indenture if the apprentice refused to do that work. But there still remained the fact that defendant absented himself without leave. As to the counter-claim, the jury would determine whether the master had done all he covenanted to do in the way of instructing his apprentice, or causing him to be instructed, in the professional occupation of a chemist.

The jury retired, and after a deliberation returned a verdict for the plaintiff, with costs. Judgment was entered accordingly, and the counter-claim dismissed.

Personalities.

MR. J. J. FELL, chemist, Morecambe, has been elected a member of the local School Board.

THE Brighton Board of Guardians have appointed Mr. Albert Collings as dispenser to Dr. Ross, at the Workhouse, for a period of three months.

MR. H. R. MAYNARD, chemist, Market Harborough, delivered a geological lecture there last week on "Flint Chips." Mr. William Mair, dispenser to the Dundee Infirmary, lectured to the Dundee Working-men Naturalists' Club on "Orchids."

A "CHEMIST AND DRUGGIST" man, who dropped in to a concert in St. Martin's Town Hall the other evening, had the pleasure of hearing a chemist and druggist amongst the professional singers. This was Mr. S. Jamieson, formerly in business at Cupar-Fife, who has been studying music in London for two years past, and has now come out as a baritone.

MR. HARRY D. FUGE, pharmaceutical chemist, who several years ago gave evidence of his ability by taking, as an apprentice, first prize in our Corner for Students, and ultimately became a Bell scholar and Pereira medallist, has just added to his achievements by taking a Major scholarship of 100*l.* a year at Trinity College, Cambridge. The scholarship is tenable for five and a half years. These scholarships are competed for annually by men of one, two, and three years' standing, and hitherto it has been most unusual for one to be gained for natural science by a man in his first term of residence, which is Mr. Fuge's case.

MARRIAGES.

[Notices of Marriages and Deaths are inserted free if sent with proper authentication.]

HINKSMAN—FORREST.—At Wellbank House, Carlisle, on December 26, by the Rev. Thomas Hobart, M.A., John Hinksmann, chemist, Carlisle, to Sarah Lambie Brown, eldest daughter of John Forrest, actuary, Savings' Bank, Carlisle.

ROBSON—WOODWARD.—On December 27, at Fawcett Street Wesleyan Church, Sunderland, Mr. Richard G. Robson, chemist, to Miss Louisa Woodward.

DEATHS.

FERGUSON.—On December 26, at Colombo, A. M. Ferguson, C.M.G., senior editor of the *Ceylon Observer*, after fifty-five years' residence in Ceylon. Aged 76.

HADFIELD.—At Rochdale, on December 17, Mr. James Hadfield, chemist and druggist, of Cheetham Street. Aged 63. Mr. Hadfield's death was sudden. On Wednesday evening, December 14, he attended a meeting of Freemasons, at the Spread Eagle Hotel, in connection with the Hope Lodge, and whilst there complained of illness. He went home early, and obtained medical advice and attendance, but he gradually became worse, and, on Saturday morning, died.

HEATON.—On December 26, at 20 Wylva Road, Anfield, Mr. Edwin Garland Heaton, formerly in business as a chemist and druggist in Dale and Exchange Streets, Liverpool.

DEEDS OF ARRANGEMENT.

The following deeds of arrangement with creditors have been filed at the Bills of Sale Office, under the provisions of the Deeds of Arrangement Act, 1867. Some of these deeds are for the purpose of carrying out compositions with creditors (and such are specified below), but the great majority of them are "assignments" in the ordinary form, to a trustee or trustees, for the benefit of creditors. The Act referred to expressly provides that registration shall not give validity to any deed which is an act of bankruptcy, and there is no provision, in the Act making any of these arrangements binding upon dissenting creditors.

es, Daniel Evan, Penrhiwceibr Road, Penrhiwceibr, chemist. Trustee: Edward T. Collins, 39 Broad Street, Bristol (accountant). Dated, December 7; filed, December 14. Unsecured liabilities, 132l. 8s. 9d.; estimated net assets, 50l. The following are scheduled as creditors:—

	£	s.	d.
Allan, Cockshut & Co., London	22	15	5
Anderson, R., Norwich	1	0	0
Harc & Co., Bristol	11	4	2
Heath, Miss, Manchester	11	8	0
Sawyer, J., & Sons, London	18	6	2
Southall Bros. & Barclay, Birmingham	17	15	8
Ward & Co., Bristol	11	3	4

son, Samuel, 71 Duke Street, St. Helens, chemist and druggist and fly-paper manufacturer. Trustee: Geo. C. Whitfield, Harshaw Chambers, St. Helens (accountant). Dated, December 12; filed, December 13. Unsecured liabilities, 478l. 1s. 2d.; estimated net assets, 173l. 1s. 1d.; creditors fully secured, 33l. 11s. Assignment upon trust, with power to trustee to carry on the business with a view to payment of a composition of 7s. 6d. in the pound by three equal instalments, on April 8, 1893; August, 1893; and December 8, 1893. The following are creditors:—

	£	s.	d.
Ayrton & Saunders, Liverpool	24	13	6
British and Colonial Druggist, London	10	0	0
Brumwell, Herbert, Sutton	25	0	0
Chemist and Druggist, London	14	18	0
Duncan, W. A., & Co., Manchester	10	0	0
Lomax, B. H., St. Helens	10	10	0
Mackay, G. J., Liverpool	13	10	4
Parr's Banking Co. (Limited), St. Helens	48	5	5
Raines & Co., York	29	14	8
Scott, Jos., St. Helens	10	0	0
Southall Bros. & Barclay, Birmingham	25	7	9
Taylor & Co., Liverpool	10	11	3
Thompson, John (Limited), Liverpool	13	17	0
Thompson, W. F., & Co., Liverpool	10	10	6
Whitfield, G. C., St. Helens	10	10	0
Wilson, John, Abergavenny	61	8	4
Wood & Co., St. Helens	23	11	6

er, William, 18 Market Place, Manchester, and George's Road, Heston Norris, manufacturing chemists and vendors of chemical specialities (partners—William Walker, 2 Carrington Road, Flixton, chemist and druggist, and Frederick Lewis, of Bo werscroft, Wilmslow, analytical chemist, trading as). Trustee: Harry L. Price, Manchester (chartered accountant). Dated, December 20; filed, December 22. Unsecured liabilities, 242l. 14s.; estimated net assets, 117l. 11s. 9d.; creditors (preferential), 75l. 19s. 3d. The following are scheduled as creditors:—

	£	s.	d.
British Fancier, Manchester	14	11	0
Grosvenor, Son & Co., London	10	2	9
Sewell & Co., Sheffield	105	17	6

Preferential.

Manchester Corporation (rates)	10	8	9
Hopwood, Captain (executors, rent)	58	0	6

Bankruptcy Reports.

Re MACDONALD, SONS & CO. (LIMITED), 1 Finsbury Square, E.C., Medicated-wine Manufacturers.

THE creditors of this company met at the Carey Street office of the Board of Trade on December 29, before Mr. Haig Brown, acting for the Official Receiver. The company was formed in July, 1892, with a nominal capital of 15,000l., to acquire and take over as a going concern the business of medicated-wine manufacturers, and beef and malt biscuit

manufacturers, carried on by Messrs. Woods & Thomson, at Finsbury Square, under the style of Macdonald, Sons & Co., together with the "capital, property, and assets" of such business. The purchase-price was agreed at 6,000l., payable as to 1,000l. in cash and 5,000l. in shares, together with forty founders' shares of 25l. each. The company went into liquidation last November, the winding-up order being made on a creditor's petition. Accounts have been filed showing total liabilities 893l. 17s. 5d., of which 798l. 14s. 1d. are expected to rank against assets 29l. 7s. 6d., after allowing 28l. 0s. 6d. for preferential claims. The total deficiency as regards the contributories is returned at 1,141l. 16s. 7d.

The Chairman having called over the proofs, said there was no quorum and there would have to be a formal adjournment, after which, unless some special resolution were passed to the contrary, the Official Receiver would act as liquidator and wind up the company in the usual way.

In reply to a creditor, the Chairman said that at present the Official Receiver was not in possession of sufficient evidence to warrant an application being made to the Court for the holding of a public inquiry. An investigation was proceeding, and if the circumstances warranted such application it would be made in due course. It was necessary before applying to the Court that the Official Receiver should have strong evidence that there had been fraud or misrepresentation, but the creditors could rest assured that the fullest investigation would be made.

On behalf of Messrs. Hanson, Son & Barter it was pointed out that they had supplied goods to the company so late as October 17, although on the 28th of that month the voluntary liquidation was resolved upon. That firm did not propose to make any distinct charge at that meeting, but they were anxious that a public inquiry should be ordered.

The Chairman promised to give the matter his attention, and added that he could not hold out any hopes of a dividend. The goods on the premises had been disposed of for a gross sum of 11l.

A discussion ensued respecting the founders' shares. The Secretary said that the certificates were posted to the persons, of which a list was given to him, but it being subsequently ascertained that the proceedings were irregular, the whole of the certificates were returned.

The meeting was then formally adjourned for a fortnight.

The following are the principal creditors, viz.:—

Unsecured.

	£	s.	d.
Cycling, Bouverie Street, Strand	30	0	0
Hanson, Son & Barter, Eastcheap, E.C.	18	0	6
Horncastle, W. R., 61 Cheapside, E.C.	176	0	0
Kuntzen & Co., 42 Bishopsgate Street Without, E.C.	25	16	0
Meadowcroft & Son, Blackburn, manufacturing chemists	37	15	9
Mercantile Agency Company, Leadenhall Street, E.C.	48	0	0
Plumb, J. H., Elmore Street, Islington	10	0	0
Seckbach & Co., Hansell Street, E.C.	12	15	0
Stevenson & Howell, Southwark Street, S.E., manufacturing chemists	19	13	9
Taxley, S. O., Finborough Road, South Kensington	25	0	0

List E.—Liabilities.

	£	s.	d.
Admiralty and Horse Guards Gazette, Fleet Street, E.C.	10	10	0
British and Colonial Druggist, London, E.C.	45	0	0
Bryett, F. C., Walham Green	62	16	4
Family Doctor, Catherine Street, Strand	12	12	0
Financial Truth, Strand	12	0	0
Grocer and Oil Trades Review, Eastcheap Buildings, E.C.	20	0	0
Grocers' Gazette, Philpot Lane, E.C.	17	0	0
Kesselbach, H., Streatham	40	0	0
Pelican, Strand	10	10	0
Society, Strand	20	0	0
Star, Stonecutter Street, E.C.	90	3	6
Vanity Fair, Strand	21	0	0

Preferential.

Taxley, S. O., Finborough Road, South Kensington	23	19	0
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The shareholders of the company met later, under the same chairman, and there again being no quorum that meeting was also formally adjourned for a fortnight.

Re EDWARD GEORGE THOMSON, late of 1 Finsbury Square, E.C. Medicated-wine manufacturer.

UNDER the failure of this debtor, against whom a receiving order was made on November 24, accounts were issued from the London Bankruptcy Court last Thursday showing debts 408l. 6s. 3d., and assets 10l. 3s. 5d. The debtor was one of the vendors of the business acquired in July, 1892, by the above named company.

From the report of Mr. A. H. Wildy, the Official Receiver, it appears that for some time prior to January, 1892, Mr. Thomson was a medical student, and at that date he executed a deed of partnership with another person, who for some six months previously had traded in Finsbury Square, E.C., as a medicated-wine manufacturer. He (bankrupt) brought in as capital 400l., a gift from a relative, and had a half-share of the business. The career of the business subsequent to its conversion into a limited company is detailed on page 924. Mr. Wildy further reports that the books of accounts produced by the bankrupt are not such as sufficiently disclose his business transactions or financial position.

ALLEGED FRAUDS IN THE SPICE TRADE.

So-called "ground black pepper" (says a recent wholesale circular) is still being extensively sold, at prices which are simply impossible except at a heavy loss. The lowest market cost price of whole light dusty Penang, which is the poorest quality that can be ground, is 2½d. per lb. The lowest cost of grinding, with loss on weight and putting into barrels, is ½d. per lb. The cheapest ground pepper must thus actually cost 3¼d. per lb., allowing ¾d. per lb. for the dealer's profits. Such a quality is quite unfit for table use, and is only suitable for manufacturing purposes. In the same way, the lowest Penang white pepper now costs, after the recent fall, 3¼d. per lb. The cost of grinding, loss of weight, and barrels is ½d. per lb., the loss in weight being heavier than with black pepper. This would bring the first cost up to 4¼d., allowing ¼d. for the dealer's profit. For ground ginger the refuse of ginger-beer making is now extensively substituted. It would be just as reasonable to sell exhausted tea-leaves for tea as to sell spent "ground ginger" for the genuine article. The worst of the matter is that price is not so direct a guide with spent ginger as it is in the case of the lowest pepper, for the operation with the former goes further. It is well known to the wholesale trade that spent ginger is not only fraudulently mixed with common qualities, but with the better qualities as well, in order to obtain an illegitimate profit. With the lower sorts, however, it must be clear to anyone that genuine ground ginger cannot be sold below the cost of the raw roots, inasmuch as the cost of grinding and barrels is 8s. per cwt.

MACARONI makes not a bad catheter when there is nothing else at hand and Nature is urgent. Dr. R. C. Kirkpatrick, of Montreal, tried it one day with success.

CUBAN WAX AND HONEY.—In 1891 58,192 lbs. of wax were shipped from Cuba. They were taken between Spain and the United States. In 1890 the quantity was 45,450 lbs. Two hundred and fourteen tierces of honey were sent to the United States in 1891, as against 589 tierces in 1890.

A NEW YELLOW-FEVER CURE.—Two years ago a certain Dr. Garcia, of San Jago de Cuba, tried some experiments on yellow-fever patients (who are pretty numerous there) by putting them, bed and all, into a box with double walls and top, and lined with metal, the space between the walls being filled with ice. This produced a very damp temperature a few degrees above freezing-point, and has given very good results. The theory is that the low temperature destroys the microbes, and that the moisture is absorbed by the lungs and pores of the patient, and the extreme thirst and stoppage of the action of the kidneys, so common in yellow fever, are at once remedied. Dr. Garcia is at present at Havana, continuing his investigations in this respect.

AT THE COUNTER.

THESE are from the banks of the Thames:—

"1d. Violent Powder." "Comical Food." "Infectio of Senna." "Gum Acrobat." "Repaired Charcoal." "Poleaxe and Honey."

A CHEMIST at Lewes sends the following which he received (that is to say, he sends the note but without the enclosure):—"My lital garl is very porley she 6 yers old, and brot this large worm from hur moth yesturdy it nerley choked hur. Could you cinley send sumthing for her i sent it for you to see the cind of worms and you could send sumthing for them plees."

THE MEANEST CUSTOMER—ANOTHER COMPETITOR.—A lady descendant of Abraham called at a Birmingham pharmacy for some medicine for a slight ailment, and got cured for 1s. A week later she called and asked the pharmacist to give her a prescription for the medicine which had done her so much good. Knowing madame as a regular store customer, Mr. Galen found himself unable to oblige.

THE following recipe, which was compounded by a chemist at Bridgnorth, should be a valuable one if the virtues of all the ingredients are added together:—

1 oz. Dupuiper	1 oz. Marsy
" Cleucenrgrain	" Cog liquarice paudere
" Beyin	" Flour bremsches
" Worse sppee	" Gromsy
" Nisre	" Parudes
" Common seeds	" Fenigreek
" Anised	" Buhammoner
" Black ctatin	

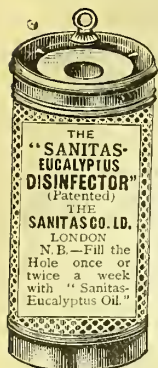
E. D. sends us the following from the far west of England:—

"Willow charcoal in a liquid bottle."

"A porpoise-plaster."

Two respectable "persons" enter pharmacy, seat themselves, and ask to be shown some "stomach-pumps, about 1s. 6d." On further inquiry it transpires one of the ladies had been in hospital for a few days, and (as she avers) had overheard one of the doctors say "her stomach wanted 'cleaning out.'" As this agreeable operation had just been performed on a young man in a neighbouring ward with a pump, the bright idea struck her it would be just the thing for *her*. She went away sorrowful and unconvinced *without* the hydraulic apparatus "at 1s. 6d."

"TO BE TAKEN IMMEDIATELY."—One evening, a little before closing-time, a country yokel came into the shop with a prescription, written by the club doctor, for a draught and pills. He would "take it now." The draught was one of 10 drops of laudanum and a large dose of castor oil, "to be taken immediately." I gave it him in a measure, and whilst I was making the pills he swallowed it. He made no casual remark about its being nasty, and with the exception of licking his lips considerably, preserved a dead silence. The pills being finished and wrapped up, he took them away with him. In half an hour's time he returned with the message that I had not sent the draught; I reasoned with him that I had not only given it to him, but that he had swallowed it in my presence. When he explained that the prescription was for someone else the silence became even deeper than on the first occasion, and so oppressive that I retired into the inmost recesses of the back kitchen less the feelings of my customer should be hurt by explosions of laughter. The yokel had been under the impression that I was going to treat him to something good to relieve the tedium of waiting; then when he found it was not good, thought I had played him a trick, but wouldn't admit that he had been "done." When my face could be pulled straight enough I returned to make up the second draught, and ultimately the victim marched off with the air of an injured innocent, wondering what was going to happen next, and what the dose was good for.—THE PERPETRATOR. (131/32.)



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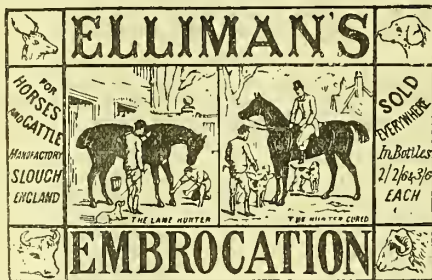
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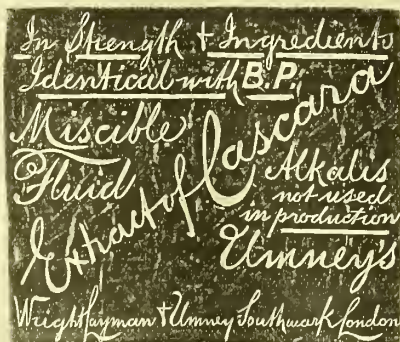
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Editorial Comments.

THE PHARMACEUTICAL YEAR, 1892.

It cannot be doubted that the year with which we are now parting has been an exceptionally important one in the history of British pharmacy. A distinct and considerable advance in the position held by chemists and druggists has been accomplished. We have secured no new Act of Parliament; have not, indeed, tried for one. But for the first time since it was passed, twenty-four years ago, the Pharmacy Act of 1868 has been administered with a sufficiently firm hand to make it effective. For many years we have pointed out that the trade in poisons should be regarded as the corner-stone of the pharmaceutical business. We have pressed the view that the Legislature had urgently insisted that the public should be protected from accidental or criminal poisoning as far as protection was attainable by statute. The reluctance of many chemists to fulfil the requirements of the Act in spirit as well as in letter, and the disinclination of the body to which its execution was to a great extent committed to put it into effective operation, have always been to us inexplicable. Everything comes to him who waits, however, and it is evident that at last the advantage of exercising those powers which Parliament has

entrusted to us, instead of wasting time in planning new schemes of questionable value, has been realised.

It was in 1891 that Mr. Justice Hawkins made it clear to us all that the law insisted on the actual seller of a poison being a qualified person. This view had been clearly enough set forth on high authority years previously, but somehow it had never caught on before. After the decision in the Wheeldon case, however, the market value of the qualified man went up suddenly and permanently, and though a degree of inconvenience has necessarily resulted to some employers, the effect of the judgment on the whole is to have taken us a long step forward towards the goal which we have all been professedly aiming at—namely, the better remuneration of men who had gone to the expense and trouble of qualifying themselves.

Much the same may be said of the special event of this year, which has been, of course, the movement in regard to

POISONOUS PROPRIETARY MEDICINES.

The absurd anomaly of surrounding the sale of poisons with numerous precautions, but of abandoning all these if only the poisons are described by an innocent name, was apparent to everybody for years; but it was not until the publication of Alpe's "Handy-book of Medicine-stamp Duty," in 1887, that distinct notice was given to all concerned that the exemption clause, which had been until then relied on, was of no practical value. Mr. Alpe, writing as a lawyer, asserted confidently that no Court would allow the term in regard to any medicines, except such as had actually been patented. And, so far, his opinion has been amply justified. Mr. Lushington, the Bow Street Magistrate, and Judge Bacon, of the Bloomsbury County Court, have this year decided, without any shade of hesitation, that in construing the Pharmacy Act they can pay no attention to evidence as to the loose way in which the term had been for many years employed by chemists and the public, but can only regard as patent medicines those which either are, or at some time have been, sold under the protection of letters patent. The Grocers' Association are not disposed to accept this ruling as final, and there is, therefore, every probability, we are glad to find, that the question will be submitted to the High Court, and finally disposed of. If the judgments already recorded are supported, it will, following the qualified-seller decision, prove to both the public and to the trade that the sale of poisons is a serious business, which the Legislature intends shall be treated seriously. The credit of having brought this question forward and of pressing it to a legal decision is due in the main to Mr. Ernest Hart, in his capacity of chairman of the Parliamentary Bills Committee of the British Medical Association.

THE ACTIVITY OF THE PHARMACEUTICAL COUNCIL

has not been limited to their campaign against the grocers. They have proceeded against unqualified vendors of weed-killers, sheep-dips, and other poisons. In Glasgow they made some impression on the doctor's-shop system, which so largely prevails in that city, by recovering judgment against eight unqualified vendors of poisons in such establishments. The raid has not, however, been followed up. They have created a new dignity, designated "Research Fellow," which was preferred to "Discoverer in Pharmacy," as at first suggested. They are now getting 5*l.* 5*s.* instead of 3*l.* 3*s.* as the fee for the Minor examination, which ensures a substantial addition to their income—not before it was needed, as their last financial statement showed an excess of expenditure over income to the amount of 1,227*l.* At the Council Election in May last there were only exactly as many candidates as vacancies, and consequently, for the first time for

many years, there was no contest. By his re-election to the chair in June last, Mr. Carteighe entered on the second decade of his Presidency.

THE QUALIFYING EXAMINATION

now comprises questions on the poisons laws, and to meet this requirement we have lately published a very complete treatise on the Pharmacy and Poison laws of the United Kingdom, which has been highly spoken of.

THE COUNCIL OF THE PHARMACEUTICAL SOCIETY OF IRELAND

have manifested at least as great activity in the vindication of their rights as has been displayed on this side of St. George's Channel. They have secured penalties in a number of cases from traders not pharmaceutical chemists who have compounded physicians' prescriptions, but in one instance unexpected sympathisers with law-breakers were found among the Dublin Castle authorities, who chose to reduce two penalties from 5*l.* to 1*l.* each without any consultation with the Pharmaceutical Council, and discourteously refused any explanation of their conduct. Another defeat and surprise occurred when a Cork chemist, holding the British Major qualification, was sued for a penalty for compounding. That he was not qualified under the Irish Act was proven, but a technical objection was raised by the defendant's counsel that the plaintiffs' solicitor was not authorised to prosecute under seal, and therefore had no *locus standi*. This point was successful, much to the gratification of the defendant's fellow-citizens.

LEGISLATION

had very little effect on the drug-trade this year. A new Shop Hours Act was passed, re-enacting the provisions of the old Act and making them permanent, and the scope of the Alkali Acts was extended to some extent. The election to Parliament of a chemist and druggist, actually practising as such, Mr. Charles Townsend, of Bristol, is an event which ought to be of some importance to the trade in the future. An attempt to amend the

SALE OF FOOD AND DRUGS ACT

in the interest of grocers could not be brought forward in the last Parliament but is still being pressed. Several points of interest under this Act have been decided during the year. In one Justices Lawrence and Wright decided that a purchase was valid under the Act though made by the inspector's assistant. In another case Justices Hawkins and Wills found a way of circumventing the awkward decision which the Lord Chief Justice gave the year before, to the effect that the actual seller of the adulterated article was the person liable. In the later judgment it was held that the master was liable, though the assistant who sold might be liable also. A summons in respect of raspberry wine containing salicylic acid was dismissed, but in another case, alleging the adulteration of milk with boric acid, a fine was imposed. Linseed meal was held in Scotland to be adulterated when starch was found in it, and seidlitz powders deficient in Rochelle salts have been the subjects of frequent fines. On one occasion a magistrate dismissed a summons in regard to seidlitz powders in which the purchaser had bought three powders and left one with the vendor. It was held that each powder should have been divided into three parts. In another metropolitan police-court a summons was dismissed because the words alleging that the article purchased "was not of the nature, substance," &c., had been changed to "is not," &c. The question of how much sulphate of copper may be added to preserve peas has been further fought out this year. A Glasgow

Sheriff dismissed a summons alleging the presence of 1-4 grain to the pond. Another case was brought before him charging the presence of 25 grains to the pond. This was also dismissed, on the ground that no evidence of injury from such a proportion had been submitted. A fine was, however, imposed by the Liverpool Stipendiary Magistrate in respect of an exactly similar case.

VETERINARY TITLES.

The Royal College of Veterinary Surgeons obtained a judgment in the High Court in the early part of the year against a smith who had used the title of "veterinary forge." In other actions before magistrates they gained cases in respect of the use of the titles "veterinary infirmary for horses," "veterinary farrier," and "veterinary establishment." They threatened a chemist for using the description "veterinary chemist." We invited all chemists interested to subscribe to a fund to test this claim, and we asked the College to agree to a special case being argued in the High Court. We had promises of contributions to the amount of about 50%, and if the College would have consented to our very reasonable proposal the question might have been settled authoritatively one way or the other with the least possible friction. We had, however, an unofficial intimation from the College that they declined to treat with us. But their proceedings against the chemist were not continued.

CHEMISTS' ASSISTANTS

have had a good share of our space during the latter part of the year to ventilate their grievances. They talked of forming a union to insist on shorter hours and higher salaries, and some employers urged them to combine to boycott the stores and cutting establishments, who could not legally carry on a dispensing business without the aid of qualified men. It became abundantly evident that on none of these subjects was there any chance of unanimity, and latterly the discussion has changed to an amusing squabble between a number of young men discontented with the "comfortable homes" provided for them, and a "Chemist's Wife," who, in reply to aspersions cast upon her class by some correspondents, responded with an exposure of the incompetency and deterioration of modern chemists' assistants, which, it is to be feared, is not wholly imaginative.

EDUCATIONAL.

One of the remarkable features of the year on the borderlines of legislation and practice has been the all-round increase of the standard of knowledge in the medical callings. The five years' curriculum in medicine and surgery is now an accomplished fact, and from October of this year the four Scotch universities and their medical schools have been brought into uniformity so far as curricula and examinations are concerned. The College which has charge of veterinary matters has decided to raise the standard of Preliminary education to that of the General Medical Council and has extended the professional curriculum to four years. In pharmacy the new regulations for the Minor and Major examinations have had time to get into working order, and the first result is an increased percentage of failures in the Minor examination. This is attributed to two principal causes. Non-official people say that the practice of commencing the examinations in the month before that laid down by the Council has not permitted candidates to acquire those finishing touches so eminently useful in the examination-room. But, say the examiners, the weakness of the candidates is exhibited chiefly in the practical subjects—chemistry and pharmacy—and a large proportion of them do not appear to have that business acquaintance with processes and apparatus which should be acquired in the shop and not

in the school. From inquiry which we have made it appears that this latter assertion is well founded, and ere long we may find that the new schedules, with the compulsory knowledge of the laws relating to the sale of poisons, will work out to the benefit of young chemists and druggists, by making them more competent in their business. The year's record in

PHARMACEUTICAL CHEMISTRY AND PRACTICE

is not unusually brilliant, and is chiefly notable for plodding work on minor subjects. If we begin on the highest rung of the British ladder, we find that the Pharmaceutical Research Laboratory is scarcely justifying the hopes that were entertained of it when it was founded, for during the year no results of work done in it have been communicated directly to the Pharmaceutical Society or any other pharmaceutical medium—the Chemical Society being selected for their publication. Accordingly, to that Society in March were communicated two papers in continuation of the aconitine research-record—one dealing with the alkaloidal constituents of true *Aconitum Napellus* root, and the other with the hydrolysis of aconitine and the reconversion of aconine into aconitine. Later in the same month it was shown at the Society by the director of the laboratory that zinc-and-mercury cyanide is a true chemical compound, although an extremely peculiar one; again, as the year closes, another paper comes from the Laboratory on "The Chemical Identity of Caffeine and Theine." If we were to depend upon these researches as the indication of the progress of pharmacy in this country we should be grievously disappointed. As time goes on, the Pharmaceutical Society concerns itself less and less with paper-reading. The session of last winter was given up to semi-popular science lectures and reports from the Curator, and, as far as we have gone in the present session, we have had the Curator without the lectures. Still, the Society's branch in Edinburgh succeeds in getting good material and men to keep up the interest of its evening meetings. The chief feature at these this year has been Mr. Duncan's contribution on "The Cause of the Separation of the Alkaloid in Liquor Strychnine," which he traced to excess of hydrochloric acid and consequent crystallisation of the acid-salt—an opinion which has been corroborated by Dr. Paul and others. Equally interesting have been Professor Charteris's recent suggestions regarding the revision of the British Pharmacopoeia, but these have quite failed to create anything except local interest. The work done by local associations is very creditable, the chemists' assistants of London, Liverpool, and Edinburgh especially distinguishing themselves by originality and earnestness in what we may call minor branches of research.

THE BRITISH PHARMACEUTICAL CONFERENCE

had an exceptionally good meeting in Edinburgh in August, a few weeks after the British Association had met there. This circumstance did not appear to depreciate the attendance, and although the scientific programme was above the average, much pleasure was obtained by the visitors from the social arrangements provided by the local committee. The engraving of the Conference-group which we print in this issue must be allowed to bear testimony to the number and nature of the people who attended, and as for the work accomplished, we may say that it was much less "scratchy" than usual. It may be noted that the Conference has come through an awkward crisis in the attempt of the Pharmaceutical Council to come to an agreement with the Conference Executive regarding provincial meetings of the Society. Had the Edinburgh Conference meeting been a failure, the body would have been within measurable dis-

tance of extinction. It was not; so it lives, and although it may never be robust, it will take "a deal of licking at its weight." It will have been noticed that the

IRISH PHARMACEUTICAL SOCIETY,

since the settlement of its more important administrative problems, has entered the scientific field, and gives fair promise of inculcating a taste for the higher branches of pharmacy amongst its adherents—a body which is developing satisfactorily in numbers. We refer in this, not only to the series of scientific lectures inaugurated in Dublin this winter, but to the improved method in which the practical portion of the Licence examination is conducted, which cannot fail to be of benefit to the candidates. The conditions of pharmacy in Ireland are so superior in most respects—in the distinction of the dispensing and the retail departments, in the shorter hours, and in the comparative richness of the trade—that it is somewhat surprising to find little attempt on the part of assistants there to associate as their *confrères* in England and Scotland do. Perhaps the large number in Irish pharmacy who are potential medical practitioners may account for this circumstance, yet they might be the better, either as medical men or as pharmacists, if they should thus encourage original work.

When we turn a surveying eye to other parts of

EUROPEAN PHARMACY,

we find much work accomplished in Germany, France, and other parts of the Continent, which is likely to live and to be of benefit to mankind. We may particularly notice the energy of that very young body, the Berlin Pharmaceutical Society, which from an atmosphere suggestive of beer and tobacco manages to turn out many a valuable contribution to pharmaceutical science. We may recall in passing the contributions on chloroform, in which Pictet's process, and the relative merits of its production, and those of other chloroforms, were discussed, and much light thrown on the effect of sunlight on the anæsthetic. Papers on nicotine, the synthesis of para-nitrobenzoyl chloride, on the derivatives of para-phenetidin, and other topics have been discussed before this Society. Somewhat less vigorously the Apotheker Verein maintains a regular supply of original papers, especially in its *Archiv*. Of many of these papers, we have found it advantageous to give abstracts during the year, and we may especially recall Professor Schmidt's research, in which he has carried our knowledge of scopolamine far beyond the point at which other investigators had left it, at the same time proving that hyoscyne has no separate existence, but that the substance known by that name consists of an alkaloid—scopolamine—having a different constitution from hyoscyamine and atropine. Renewed attention has been given in Germany to ipecacuanha assay processes, resulting in a nearer approach to the actual emetine value of the different kinds of root; to the life-history and components of ergot, and similarly of strophanthus-seeds; in regard to the principles contained in sarsaparilla, an investigation by Kobert, which may be regarded as a corollary to an equally important one on saponins. The increased popularity of the kola-nut has drawn renewed attention to its chemical constituents. It is now evident that the drug, although containing the same alkaloid as tea and coffee, does possess sustaining properties superior to them, owing to the peculiar manner in which the alkaloid is combined, as well as the direct physiological action of a glucoside contained in the nut. To this knowledge French investigators have contributed, and they have also been active in several other branches of pharmaceutical chemistry. We may note,

for example, the excellent work which has been done by Barnouvin on the influence of micro-organisms on pharmaceutical preparations, especially aromatic waters, and later by another on infusion of digitalis. Changes which previously were considered to be natural to many preparations have thus been shown to be due to the action of micro-organic life. We may also include in the review of the year some observations by Adrian on

OPIUM,

in the course of which he ascertained that the narcotine content of the drug is exceedingly variable, and bears a fixed relation to the morphine percentage. We may fitly notice here also the attention which has been paid during the year to Indian opium—this apart from the fiscal question, which belongs to social ethics rather than pharmacy. It would appear that opium produced in India, although containing a comparatively small percentage of morphine and a large percentage of narcotine, is much used for medicinal purposes there. We have had occasion to point out that the opium is unsuited for this purpose, and, as the year is closing, this opinion receives support from Dr. Paul and Mr. Cowley, who have examined a recent specimen of the Patna drug, and found it to contain only 8.55 per cent. of morphine. Yet this is about the highest figure yet published, and the opium was practically dry. The question of the morphine value of tincture of opium has also been dealt with, but it is scarcely ripe for comment yet, although it appears that the theoretical amount of alkaloid cannot be extracted from the drug. Before leaving the geographical survey

AMERICAN PHARMACY

must be referred to. The Pharmaceutical Association which knits together the whole of the States had a successful meeting at the White Mountains, and accomplished much useful work, especially in the commercial and education sections, while that in the scientific was not devoid of importance. Generally, pharmaceutical research in the States is confined to a few centres; but there is a large amount of work done by retail druggists in those minor subjects of practical importance which the very dullest of mortals can appreciate, and much, too, that is valuable comes from wholesale laboratories; but trade rivalry there, as well as hypersensitiveness to the trade element, is rather against the publicity of anything which savours of free advertisement. But leaving that out and recalling the better-class work done in the States during 1892, it has been an average year, although far below the standard of a decade or two ago, when American pharmacists were bringing together by honest and hard work factors in regard to

TINCTURES AND FLUID EXTRACTS

which have since proved of the highest value. Indeed, so well was the work done that it is a risky thing for any to take up the same subject again, and the exceptionally individualist work of Messrs. Farr and Wright on the alkaloidal tinctures of the British Pharmacopœia has not escaped American criticism, owing to its similarity to old investigations in the States. There is now no hesitation in this country to acknowledge Farr and Wright's investigation as one of the most critical and valuable of the year, and the papers by them which we have published have justified their object—viz., to show in what direction official formulæ should, if necessary, be amended. Here, also, we may mention as pure pharmacy subjects, Mr. John Moss's contribution on liquid extract of cascara sagrada, in which he showed how cold-water percolation suffices to exclude the bitter and useless resins; Mr. Watson Wi-

has shown that commercial medicinal extracts still contain notable quantities of copper, and Tranb has published some useful figures in regard to the mineral constituents of gum extracts. While it is not our purpose to mention even a tithe of the original papers which have been published during the year, there are some which, from their past or prospective interest, cannot be passed over silently, and amongst these is one by Mr. Hyslop on distilled water, which admirably exposed the shocking impurity of the liquid which is supplied as "Aqua destillata." We may note, too, Mr. John C. Umney's paper on the resins of *Podophyllum Emodi*, which he found too irritating to warrant the recommendation of the drug as an equivalent for American podophyllum. Papers on terebene by Mr. Wyatt and Mr. Parry brought out the interesting fact that commercial terebene is far from being optically inactive, and upon the impurity of the remedy generally quite a lively correspondence followed. Another CHEMIST AND DRUGGIST correspondence served to settle a point in regard to acetum scillæ—viz., the yield per pint of dilute acid used, and the specific gravity of the product. It is somewhat curious that at the beginning of the year Mr. Duncan was able to show that the inorganic matter in Goa powder was fairly constant in quantity, and at the end Mr. Millard finds it to be very inconstant. We may also recall, in connection with established simples, the fact that Mr. Barnard Proctor still finds more fixed oil in powdered rhubarb than it is entitled to have.

ESSENTIAL OILS

have also been the subject of considerable research—especially eucalyptus oil, a sudden and unexpected demand for which during the influenza epidemic produced a greater variety of peculiarities than Nature is ever likely to sanction. Now we are settling down to a steady and abundant supply of oils obtained from the most valued species, and the publications of 1892 certainly have placed the understanding as to what the oil should or should not be in a clearer light.

PHARMACOPŒIAS.

Any reference to the year's literature would be incomplete without mention of Professor Attfeld's report on the British Pharmacopœia, for it is to the perfection of pharmacopœias that pharmaceutical research is in a large measure directed. His budget of improvements from 1891 was not large, and the chief interest in his report centred round his suggestions regarding the incorporation in the B.P. of popular names as synonyms. Happily in 1892 he will not find many new remedies of the synthetic class to deal with. Not a single one of first-class importance has been produced, and we suspect that the protest in the land of their production against medical booming has had something to do with this. At present animal extracts are the latest trouble to pharmacists, but they are not likely to find their way into the Pharmacopœia. The long-talked-of Italian Pharmacopœia is the only new production of the year. It is a creditable affair. There has also been a reissue of the Japanese Pharmacopœia, and a supplement to the French Codex is being prepared, while progress is being made with the revision of the United States Pharmacopœia.

COMMERCIAL.

The Board of Trade returns are generally considered to afford fairly conclusive evidence of the state of the country's foreign trade, and, tested by this standard, the year 1892 has not been a very favourable one. Month after month our exports have shown a considerable shrinkage, and for the eleven months ending on November 30 the total declared value only amounted to 207,755,588*l.*, against 227,432,458*l.* and 242,158,230*l.* respectively for the corresponding periods of

1891 and 1890. The imports do not show so large a decrease in value, the figures for the corresponding periods of 1890, 1891, and 1892 being respectively 381,456,247*l.*, 392,429,299*l.*, and 386,013,049*l.* It would be a fatal mistake, however, to look upon the falling-off in our exports as the sole, or even the principal, factor by which our commercial prosperity should be gauged. But a detailed discussion of this complex problem would lead us far beyond the scope of our review, and we will therefore confine ourselves to the statement that, so far as the drug and chemical trades are concerned, the year has been a very good one indeed. Much of the prosperity enjoyed by the traders in chemical produce has had its foundation in the increased demand for medicines and disinfectants caused by the outbreak of a somewhat severe cholera epidemic on the Continent, and, even after the subsidence of that outbreak, the expectation of its revival next summer has kept certain departments of our chemical industry unusually busy.

NEW SYNDICATES.

The pharmaceutical history of the year resembles that of its predecessors in the circumstance that it is largely tinted by the formation of new combinations among manufacturers and the breakdown of old ones. We propose here to refer only to the principal of these events. As early as March last the British phosphorus manufacturers, who had long been at war with their continental congeners, made peace with their rivals, an event which at once resulted in an advance of about 60 per cent. in the price of phosphorus, and a decided increase in the quotations of all derivatives of that element. The beginning of the year found the hostilities between the American and the European bromine manufacturers un concluded, although, each party having apparently done the other as much harm as it possessed power to inflict, active operations were temporarily suspended. Then came the news that an agent of the German syndicate of producers was looking about in the States for a suitable site upon which to build a factory for the production of bromides from German raw material, and shortly afterwards the American bromine interests, again concentrated under the guidance of one operator, arrived at an understanding with their European rivals. The feeling that the threat of the establishment of a German factory in America was not altogether "bluff" probably hastened the conclusion of peace. The result of the compact (which is said to have been made for the definite period of five years) was a sharp all-round advance in bromides. The syndicate of German permanganate-of-potash manufacturers, after holding together all through the cholera period, came to a sudden stop in the autumn, but against this dissolution may be set off the establishment of conventions in chloral hydrate and in chloroform—though the latter, like most understandings between British manufacturers, is of a less definite nature than foreign syndicates generally are. A pool among the carbolic-acid manufacturers is talked of at this moment, while definite information concerning the iodine syndicate, which is known to expire at the end of the year, is anxiously awaited. There has been an exceptionally strong advance in lithia salts, but it is not easy to trace the exact causes that have led to it. The closing months of the year have brought the news of an attempt to place the whole of the Turkish opium industry under the thumb of a syndicate, but it is far from likely that these efforts will be attended with success.

THE PERFUME DRAWBACK.

Two important administrative reforms affecting the drug-trade have come into force in the course of this year. The first of these is the extension of the drawback of alcohol

duty to exported perfumery and flavouring essences; the second, the establishment of a chamber of arbitration in the City of London.

The "perfume drawback," to give it its popular name, had long been demanded by many wholesale perfumery houses, although the prospect of its concession to the trade at large was by no means relished by the few privileged houses, who had made their perfumes "in bond" with duty-free alcohol from time out of mind, but whose number was strictly limited. When these gentlemen began to perceive that the drawback would be granted in spite of themselves, they made a plucky but unavailing effort to resist the proposal. On January 29 a meeting of the wholesale perfume-trade was held at the London Chamber of Commerce, at which definite demands and suggestions for a perfume-drawback were adopted, but not until August 30 did the Board of Inland Revenue issue an order establishing such a scheme. Workers in bond were allowed to take advantage of the new regulations or to adhere to the "*status quo ante*," and all, without exception, chose the latter alternative. Since then they have made fruitless efforts to induce the Customs authorities to allow them an extension of working-hours in bond, their requests for this boon being met by a polite intimation that it was quite open to them to "go and do the other thing."

THE CHAMBER OF ARBITRATION.

The London Chamber of Arbitration owes its birth to the utter weariness of commercial people with the existing means of settling their disputes in the Law Courts. The Chamber is the joint creation of the City Corporation and the Chamber of Commerce, and if, in practice, it carries out its object of providing an efficient, quick, and cheap means of settling disputes in a binding manner, it will have earned the gratitude of all business men. The Court has only just been started, and it is fair to allow it at least a year's trial before pronouncing an opinion upon its methods. The experiment, however, will be watched with sympathy by all except the lawyer clan.

LEAD-FREE CITRIC AND TARTARIC ACIDS.

A reform of considerable interest to the drug-trade arose out of a case which came before the Woolwich Police Magistrate on July 19. On that occasion an oil and colour man was summoned by the Woolwich Local Board of Health under the Sale of Food and Drugs Act for selling tartaric acid contaminated by lead. The lead admixture proved to be so small as to preclude all possibility of injury to human health, and the summons was dismissed. The Wholesale Druggists' Association, however, promptly called a meeting to discuss the propriety of druggists continuing to sell citric and tartaric acids falling below the B.P. standard of purity. The British manufacturers of the goods named co-operated loyally with the druggists, and it was agreed that the wholesale trade should in future only sell (for dietetic purposes) citric and tartaric acids answering the B.P. test. A small committee, which was appointed to devise a standard process for applying the test, published its recommendations a few weeks ago. It is worthy of note that this occasion is the first upon which the Wholesale Druggists' Club has made its influence felt, and that it may indicate the intention of the members to act as a body when questions affecting the interests of the trade at large again arise. If properly directed, the new organisation could undoubtedly exercise a very powerful influence in shaping the course of such questions. A somewhat lame attempt to form a Produce-buyers' Defence Association at a meeting held at the Chamber of Commerce on October 4 has failed, up to the

present, to yield any tangible result. The aim of the promoters of the project, it would seem, was to form an organisation that should be able to speak *de puissance à puissance* to the powerful Produce-brokers' Association.

LABOUR DIFFICULTIES.

Labour difficulties have not disturbed the chemical-trade in 1892 to the same extent as in 1891. At the Royal Commission on Labour, a great mass of evidence, some of it exceedingly interesting, has been offered bearing upon the conditions of work which prevail in the chemical-trade, notably the manufacture of alkali, and in the white-lead trade. There is no doubt that in many factories the conditions under which the work is carried on are incompatible with rudimentary ideas of civilisation.

THE ALKALI UNION.

The first annual meeting of shareholders in the United Alkali Company was held on March 24, when a dividend at the rate of 5 per cent. per annum on ordinary shares was declared. Up to the present this great syndicate has disappointed the expectations of those who predicted its speedy breakdown, and there seems now a prospect of a fairly profitable career before the Union. But nothing is more uncertain than the future of the present methods of alkali manufacture, and the process upon which the success of the Alkali Union is largely dependent may at any moment be revolutionised. Mr. Ludwig Mond is known to be experimenting with a new process aiming at the recovery of chlorine, and thereby threatening the Union's practical monopoly of the bleaching-powder and chlorate-of-potash markets. Early in January the Caustic Soda and Chlorine Syndicate (Limited) exhibited a process for the manufacture of alkali by electricity, patented by Mr. Greenwood, and which was spoken well of by several authorities, including the electricians to the General Post Office. Of this scheme, however, nothing more has since been heard, and it may be safely left out of practical consideration.

QUININE AND CINCHONA.

The quinine and cinchona traders have not been greatly disturbed this year. "Association" and "syndicate" rumours were, indeed, as plentiful as usual, but up to the present nobody is one penny the worse or the better for them. In April it was reported that a syndicate of bark-buyers, with a capital of 25,000*l.*, had been formed in Amsterdam, but that syndicate, like certain chemical combinations, existed, if at all, in the nascent state only, and was never heard of again. About a month afterwards an elaborate preliminary prospectus of the "Cinchona Association (Limited)" burst upon the world, which did not seem to be greatly disturbed by its apparition. The "Association" was to have its headquarters in London and Amsterdam, and was intended to embrace all mercantile firms and planters interested in the bark-trade. Its actual incorporation, however, was not to come to pass until the unit had fallen below 1*l.* per lb., and as that contingency has not yet been realised, the Association still remains an ethereal essence. The direct consignments of cinchona-bark from Java to one of the German factories have ceased, and there has been a good deal of talk of the desirability of founding a quinine-factory in Java. Elaborate plans have been drawn up, showing that the profits of such an enterprise would probably be very great, and, with an improved market, might become almost fabulous. The Java planters' enthusiasm, however, has not yet reached the practical height of planking down the cash. Meanwhile the low quinine prices continue, and yet one of the principal German factories has paid a 30-per cent. dividend to its shareholders.

We have not heard much of any discoveries of processes for the manufacture of artificial quinine, although an attempt to prepare methyl-cupreine, which is identical with quinine, from cuprea-bark proved successful. Unfortunately for the discoverer, it is at present much cheaper to manufacture quinine direct in the usual way.

NEW DRUGS AND SUBSTITUTES.

New crude drugs and attempts to substitute hitherto unknown articles for genuine specimens of *materia medica* have been very rare this year. An attempt to sophisticate Mogadore beeswax by the admixture with it of paraffin wax was exposed, first by ourselves, and afterwards by one of the British consuls in Morocco. A false white hellebore was imported into Liverpool from West Africa early in the year, and the temporary high price of ipecacuanha has caused several substitutions for that drug to be imported from America. Most of these have been promptly identified and their worthlessness demonstrated. The camphor refining industry has now been firmly established in Japan, and consignments are regularly received here. Flower-farming with a view to the distillation of essential oils has been pursued with energy in Australia, and the Government farm at Dunolly, in Southern Australia, appears to be doing good work in popularising the scent-industry there. Florida and California are also mentioned as trying to establish essential-oil distilleries. The enormous increase in the consumption of eucalyptus oil has brought several new varieties into commerce, and the supply is now so large that there is little prospect of scarcity again arising. Quicksilver has been found, and, it is said, successfully mined, in Australia, Borneo, and Chili, but these new sources of production are as yet too insignificant to affect the market prices. The rumoured discovery of nitrate-of-soda deposits in German East Africa proves to have had no foundation in fact, but quite recently it has been asserted that large saltpetre and plumbago beds have been found in Mashonaland.

TARIFFS.

The new French Customs tariff, which passed into law on January 11, and into active operation on February 1, has been the most important fiscal measure of the year in international commerce. The American tariff will probably be modified after some time as a result of the Democratic victory at the recent Presidential election, but the change is likely to be brought about slowly and gradually, and there is not much reason for expecting that our commercial relations with the States are likely to benefit from tariff changes in 1893.

PRICE-FLUCTUATIONS.

The price-fluctuations in the drug-market have been unusually numerous this year, but, take it all in all, there has been a decided tendency towards higher rates. In the summer a strong run set in on all kinds of disinfectants, and a general rise in prices of these articles ensued, only part of which has been lost since. At the present moment a syndicate is being arranged in carbolic acid, which may, if concluded, have the effect of still further augmenting the price of that popular disinfectant. Bleaching-powder, chlorate of potash, and other leading manufactures of the Alkali Union, have been repeatedly raised in price in pursuance of the well-understood policy of that organisation. Chloroform has followed bleaching-powder. Permanganate of potash had a temporary boom, followed by an early collapse. Camphor has been an object of active speculation through the year, and closes with every prospect of a further rise. Opium and its products have also risen. We have lately given information concerning a monopoly which certain financiers have

attempted to form (up to the present without success) in Turkey. Italian essential oils have ruled high all through the year, and so has menthol. The medicinal-seed crops have been failures in most European countries, and supplies have generally been small and poor in quality. In September there was a run on cascara sagrada. Vanilla and Tinnevely senna have both risen in value owing to the reported crop-failure. There have further (to enumerate only the more important articles) been considerable fluctuations in ipecacuanha, ergot of rye, morphia, codeia, manna, quicksilver, gum kino, gum acacia, beeswax, otto of rose, star-anise, buchu, Tonquin beans, jaborandi, and tragacanth.

EUCALYPTUS OIL.

One of the most remarkable instances of sudden inflation of value in the price of a drug occurred early in the year, when eucalyptus oil was seized upon by a panic-stricken public as a prophylactic for cholera and influenza. The rush upon the article took the importers unawares. The oil had been greatly neglected for a long period, and, as shipments had ceased to be profitable, the imports had fallen off considerably without anyone heeding the fact. So, when eucalyptus became the remedy of the day, there was very little available supply, and, though consignments were hurried forward, a hiatus supervened sufficient to enable holders to advance their prices to a point many times in excess of the ante-specific days. Unlike other cleverly-boomed articles, eucalyptus has stood the test of usefulness as an influenza prophylactic and disinfectant fairly well, and its employment has been materially extended as a result of the run upon it.

LIMITED LIABILITY COMPANIES.

We have recorded the incorporation of about a dozen retail chemists' businesses into limited liability companies during the year. This is not more than half the annual number which we have reached for several years previously. As a means of evading the provisions of the Pharmacy Act, qualification by incorporation has not been found to be so successful since the penalties against the unqualified seller have been more vigorously enforced. The conversion of wholesale and manufacturing concerns into joint-stock companies proceeds. Among the more prominent registrations during the year may be named Pears (Limited); John Richardson & Co., Leicester (Limited); Alfred Bishop & Sons (Limited); Lynch & Co. (Limited); The Chemists' Association (Limited); and John Thompson (Limited), Liverpool.

OBITUARY.

Unfortunately, the year's record cannot be made up without taking account of a number of serious losses. Some of the best-known men among British and foreign pharmacists have been taken from us during the year. Theophilus Redwood and George Webb Sandford were two of the most famous names in modern British pharmacy. William Ainslie was a representative Scotch pharmacist. Harry Napier Draper filled an equally prominent position among the pharmacists of Ireland. Bedford in the United States, Ferrand and Soubeiran in France, Von Hofmann and Theodor Schuchardt in Germany, and Brigade Surgeon Dymock in India, were men whose labours had made their names widely known wherever pharmaceutical science was recognised. We have had to record, too, the death of the first editor and a part proprietor of this journal, Major Morgan; of another conscientious and highly esteemed pharmaceutical journalist, Francis Passmore; of John S. Ward, the President of the Liverpool Chemists Association; and, in the wholesale trade, of F. C. Hills, the chemical manufacturer; and of Julius Cyriax and Fred Burbidge, both partners in the same wholesale drug-firm.

"THE PHARMACY AND POISON LAWS OF THE UNITED KINGDOM."

THIS book is now ready (2s. 6d.; *post-free*, 2s. 9d.). It is thoroughly valuable to all connected with pharmacy, and we have received highly complimentary notes regarding it from several gentlemen who take a special interest in pharmacy law. The following is what the *Pharmaceutical Journal* has said of it:—

The production of this work appears to have been suggested by the circumstance that the Pharmaceutical Societies of Great Britain and of Ireland, in exercise of the powers conferred upon them by Parliament, have both recently resolved that candidates for qualification to practise pharmacy shall be required to possess a knowledge of the laws in force relating to the sale of poisons. This subject having therefore been added to the examination which has to be passed before registration as a chemist and druggist, the present treatise is intended to provide the information necessary for that purpose, and to furnish a history of the legislation relating to the practice of pharmacy in the United Kingdom, together with records of the interpretations of the statutes which have been arrived at in the courts and by other means.

The object in view is a very useful one, and we cannot speak too highly of the careful and temperate manner in which the several features of pharmacy and poison law have been described and illustrated in this little treatise. It is indeed remarkable that this important subject has hitherto received so little attention, since the statute law relating to the sale of poison is not only intended to promote "the safety of the public," but has also a direct bearing upon the business of all chemists and druggists, as well as an intimate connection with their material interests. The appearance of this book at the present time is also extremely opportune, independently of its utility for candidates about to undergo examination. Within a few months twenty-five years will have elapsed since the passing of the Pharmacy Act, 1868, by which the restriction of the sale of poisons was established, and conditions were defined under which the sale and dispensing of poisons were thenceforth to be carried out by duly authorised persons. But notwithstanding that fact, and the other considerations referred to above, the statute law relating to the sale of poison has been, and still continues to be, very generally misunderstood, and, what is even more remarkable, to a large extent inoperative.

In the treatise now referred to, the subject of pharmacy and poison law is dealt with historically, commencing from the end of the last century, when the hostile relations of apothecaries and chemists and druggists, as well as the absence of any provision for ensuring the proper qualification of dealers in drugs and dispensers of medicine, demonstrated the necessity for legislative regulation, and for internal organisation of the practice of pharmacy by those engaged in that calling. Then follows the history of the various attempts to provide for these wants, of the influence exercised by the successive fits of popular excitement in regard to poisons and the dangers to be apprehended from them, resulting, on the one hand, in the foundation of the Pharmaceutical Society, and, on the other, in the passing of the Arsenic Act, and eventually the Pharmacy Act, 1868. This statute, to which, in regard to the circumstances under which it was enacted, might be attributed, in sporting language, the pedigree "got by Discord out of Panic," forms the most important subject of the treatise under notice. The conflict of opinions which prevailed at the time is well illustrated in the brief account given of the debates upon the Bill in both Houses of Parliament, and this is usefully authenticated by the publication of reprints of the reports from Hansard's Debates. One thing, however, is made clearly apparent—viz., that the one paramount intention of the Legislature was that expressed in the first few words of the preamble to the Act, "Whereas it is expedient for the safety of the public." Everything in the Act was directed to that one object, and that was the ruling idea throughout the debates which took place in Parliament.

In the accounts given of the various cases which have come before the Courts, brevity has been combined with due regard to the chief points of the decisions and of the arguments made use of on both sides. With regard to the

questions that have been raised as to the interpretation of some parts of the Act we find at page 67 the sensible remark that "difficulties can generally be resolved if chemists will endeavour to act in accordance with the spirit of the law, without, on the other hand, reducing the Act to an absurdity, as would be done if, for instance, chloroform-water were labelled 'Poison.'" If such a view of the obligations attaching to the position of registered chemists and druggists had been more generally made the guide of their practice in regard to the sale of poisons it would long since have been possible to make the Pharmacy Act an effective means of protection against encroachments upon their business which have been to a great extent promoted by a too common disregard of the Pharmacy Act. This, however, is an aspect of the matter that will have but little influence upon the legal construction of the Act, or the interpretation of its provisions. For those purposes "the safety of the public" will be the only consideration, and the application of the Pharmacy Act for the conservation of the trade interests of chemists can only be rendered possible through their internal organisation and by their co-operation with that object. This can scarcely fail to be the lesson taught to those who carefully consider the record of cases given in this excellent little book, which should be in the hands of every registered chemist and druggist in the kingdom.

The book is a valuable compendium for the druggist, doctor, and lawyer, and is likely to be regarded as an indispensable text-book for those preparing themselves for the examination of the Pharmaceutical Societies. In this connection it is aptly brought to mind that, on and after January 1 next, candidates for the licentiatehip of those societies will be required to enumerate the poisons contained in Schedule A of the Pharmacy Act, 1868. Also, to describe minutely the conditions of selling poisons, both wholesale and retail, and all that concerns the proper entry of poisons sold, whether by themselves or as ingredients in a medicine dispensed. All this, with kindred information, is lucidly set forth in the book under notice.—*Newcastle Chronicle*.

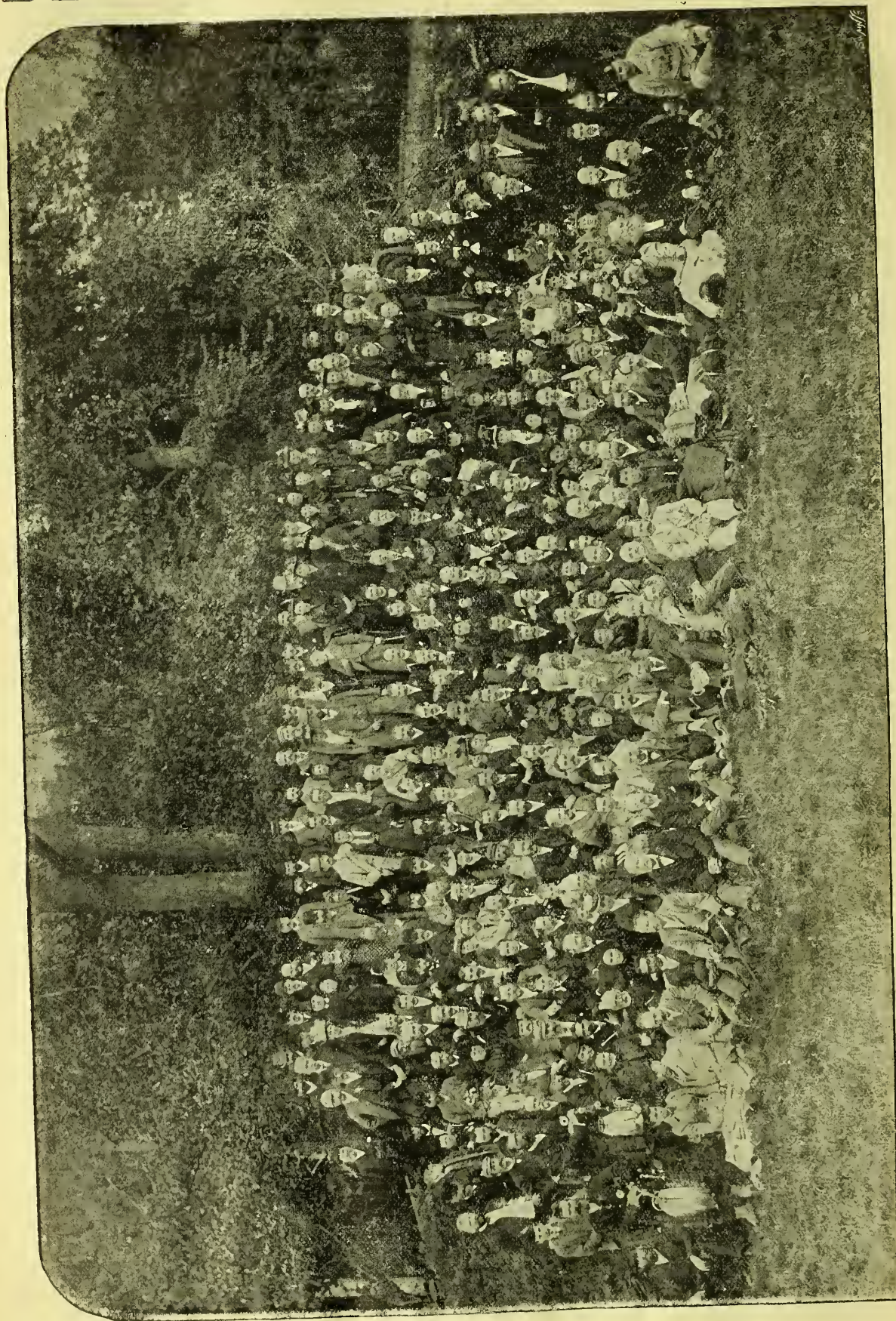
A GROUP OF BRITISH PHARMACISTS.

WITH the consent of Messrs. J. G. Tunny & Co., photographers, of Edinburgh, we reproduce on the next page, in a reduced form, the admirable photograph they took of the members of the British Pharmaceutical Conference at Killin last August. The group contains, as will be seen, excellent likenesses of two hundred pharmacists and their friends, save one. It was generally considered the most successful result of the kind which the Conference has called forth.

Our picture represents one-fourth, or thereabouts, of the superficial area of the original photograph. The consequence is that the ladies appear less lovely and the men less defective than they actually are in nature. We mention this so that our Chinese and other foreign readers should not think more highly of the general standard of British pharmaceutical beauty than it deserves. The attitudes of some of the honourable gentlemen in the group particularly of those in the front row, certainly lend support to the theory that the photograph was not a snap-shot, taken without the knowledge of the members. The gallant attempts to "look pleasant" and at ease are too painfully obvious in a large number of instances. The picturesque arrangement of the "bowlers" in that front row deserves especial recognition. It is impossible, too, to pass without a word of admiration the two bold Scotch pipers at the left of the front row. They are model photographees. They are going to have their portraits taken, and they are not ashamed of the deed.

Finally, we may mention that the photograph was taken just before lunch. Next year will somebody please supply us with a companion photograph to this one, representing the Conference at work—say, about 3 P.M.—in the middle of a paper, "Analytical and Synthetic Researches into the Alkaloids of Logwood?"

The persons represented are numbered on the annexed key—but there is something "missing," in sympathy with the season's craze. Everybody will want to know who "200" is. The official list stops at 199.



HOW SYNTHETICAL REMEDIES ARE CONSTRUCTED.

THE very complex appearance of the chemical formulæ of many modern synthetical remedies is not only apt to frighten and discourage the young student from attempting to understand the constitution of such compounds, but also frequently confuses older men who have not sufficient time at their disposal to dissect and recognise the constituent members of these complexes. Yet both graphic formulæ and the corresponding systematic nomenclature have been introduced by chemists in order that the relations between these bodies may be clearly and concisely expressed, enabling the inquirer to rapidly survey what is known, and indicating to him in which direction fresh exploration will be most profitable. Thus the study of organic synthesis should be a very simple one if entered into in the right spirit.

As in the vegetable kingdom a tree may be regarded as a compound body, formed of a series of individuals that mutually assist each other and benefit the whole mass to which they belong, so in the chemical world compounds are composed of atoms of different elements that mutually attract and hold each other, and according to their nature and arrangement give character to the chemical substance. The infinite number of organic or carbon compounds that are known to exist, and theoretically can exist, is due to the extraordinary combining capacity of the carbon atoms, each of which possesses four affinities by means of which it attracts other atoms or combinations of atoms termed radicals.

In studying the constitutional structure of organic compounds a very instructive comparison can therefore be made with the monopodial branching in plants, one affinity of the carbon atom being represented by the common foot or podium of the branches, two others by the two lateral developments, and the fourth by the terminal bud by which the axis continues to grow in an upward direction. As with further growth any of the branches may be developed to a greater extent than the others, so atoms or radicals may be added to increase the complexity of the molecule in any one direction. One or more of the growing points may be temporarily suppressed, corresponding to double linkage in chemical compounds, but the faculty of subsequent development or conversion of a non-saturated into a saturated compound is always retained. The general character of the resulting plant or compound will alike depend upon the nature of the outgrowths.

HYDROCARBONS.

Methane or ordinary marsh-gas (CH_4) is the mother-substance from which all carbon compounds are theoretically derived by substitution of one or more of the hydrogen atoms by atoms or groups of other elements. If one of these hydrogen atoms, which, as they only possess one affinity, are themselves only capable of each saturating one affinity of a carbon atom, be replaced by a second carbon atom, then three of the four affinities of the second carbon atom are free and must be saturated by the affinities of other atoms or groups. A secondary carbon atom to which three hydrogens are attached (CH_3) is called a methyl group and methyl methane ethane, dimethyl methane or ethyl methane propane, and so on.

Compounds that are composed of carbon atoms the free affinities of which are saturated by hydrogen are called paraffin hydrocarbons. They are of a very stable character and not easily attacked by reagents, and hence are generally regarded as a neutral groundwork to which character is given by the introduction of other elements or groups. "Ane" is the distinctive suffix of these compounds.

The hydrogen atoms of the hydrocarbons can be most readily replaced by the halogens chlorine, bromine, or iodine, giving rise to halogen derivatives to which the names methyl chloride, or monochloromethane, trichloromethane or chloroform, triiodomethane or iodoform, ethyliodide, are given according to the number and quality of the substituting atoms.

In these simpler derivatives the branching of the system is normal, the terminal bud, as it were, being developed, and the position of each hydrogen atom has the same value. In propane ($\text{CH}_3\text{CH}_2\text{CH}_3$) and its derivatives it will be seen,

however, that development may take place in two directions, either laterally from the CH_2 group, or terminally from either of the CH_3 groups, thus giving rise to two series of derivatives, the iso- and normal propyl compounds respectively. In compounds with a larger number of carbon atoms, the possibilities of isomerism are, of course, correspondingly increased.

By the action of alkalis on the mono-halogen derivatives the halogen is removed in company with the nearest hydrogen atom, and unsaturated hydrocarbons, as ethylene (CH_2CH_2), result. To this class or olefine series the anæsthetic "pental," or trimethyl ethylene belongs. From the di-halogen derivatives of the paraffin hydrocarbons an analogous series of less saturated compounds, as acetylene ($\text{CH}\text{:CH}$), are obtained. These two classes correspond to a monopodial branch system in which one or two lateral branches have been suppressed.

ALCOHOLS.

By the replacement of the halogen atoms in monochlor- or brom-derivatives by hydroxyl groups (OH), the corresponding alcohols are formed as methyl alcohol (CH_3OH), ethyl alcohol ($\text{CH}_3\text{CH}_2\text{OH}$), amyl alcohol [$(\text{CH}_3)_2\text{CH}\text{CH}_2\text{CH}_2\text{OH}$], and allyl alcohol ($\text{CH}_2\text{CH}\text{CH}_2\text{OH}$). The suffix "ol" is peculiar to alcohols. Alcohols are also met with that contain more than one hydroxyl group, but in this case each hydroxyl group is attached to a different carbon atom, as in glycol [$\text{CH}_2(\text{OH})\text{CH}_2(\text{OH})$], glycerine [$\text{C}_3\text{H}_5(\text{OH})_3$], mannite [$\text{C}_6\text{H}_8(\text{OH})_6$]. Compounds in which substitution is effected by a SH group instead of an OH group are known as thio-alcohols or mercaptans.

Under normal conditions one carbon atom is not capable of holding two hydroxyl groups in combination at once, and if such a compound is made it immediately decomposes with elimination of water into a new class of bodies, the aldehydes (alcohol dehydratum), in which the remaining oxygen atom is attached to the carbon atom by two affinities, equivalent to fuscification in the vegetable kingdom.

Formic aldehyde (H_2CO) is the simplest member of this series, and by replacement of one of the hydrogen atoms by alkyl groups, as methyl (CH_3), the higher homologues, ethyl or acetic aldehyde (CH_3CHO), &c., are obtained, the distinctive names being taken from the corresponding acids. If both the hydrogen atoms be replaced by alkyl groups, a class of bodies very much resembling aldehydes, the ketones, are formed, of which dimethyl ketone or acetone (CH_3COCH_3) is the lowest member. The hydrogens of the alkyl groups in the aldehydes and ketones may be replaced by halogens yielding such compounds as chloral, trichloroacetic aldehyde (CCl_3CHO), bromal, and the corresponding trichloro-butyric aldehyde, butylchloral.

Corresponding compounds can also be obtained from the unsaturated alcohols, as acrolein from allyl alcohol—aldehydes being formed from alcohols in which the hydroxyl group is attached to a primary (CH_3) branch, ketones when it springs laterally from a secondary (CH_2) group. Two or more carbonyl (CO) groups may be found in one substance forming respectively poly-aldehydes and poly-ketones.

Ketones, and especially aldehydes, are capable of entering into combination with other bodies, yielding new classes of bodies. Thus with primary alkali salts of sulphurous acid bisulphites are formed; with phenylhydrazine, an aromatic base, hydrazones and osazones; with hydroxylamine, an oxy-ammonia, oximes, as aldoxime and ketoxime; whilst aldehydes combine with aldehydes or ketones to form different kinds of polymerisation products, as paraldehyde and aldol. Aldehydes, moreover, combine with ammonia to form oxyamides, as aldehyde ammonia, chloralamide, &c.; with prussic acid to form oxy-cyanides or oxy-nitriles, which on saponification are converted into the corresponding oxy-acids; with alcohol to form the so-called acetals, of which methylal, from methyl alcohol and formic aldehyde, and acetal, the corresponding ethyl compound, are the most important. In all these last three classes the double bond of the oxygen with the carbon atom is broken, and one portion of the reagent is combined with the oxygen atom, the other part directly with the carbon atom in the aldehyde.

SUGARS.

A very numerous class of compounds that occur in nature and which have also been synthetically prepared are the sugars, which are aldehydes or ketones of hydrocarbon with

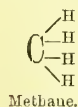
generally six, twelve, or eighteen carbon atoms, in which a hydrogen atom attached to each carbon atom has been replaced by a hydroxyl group. In consequence, the relation of hydrogen to oxygen atoms in these oxyaldehydes is 2:1 as in water; hence the generic name carbohydrates. The most common natural sugars are glucose, galactose, and mannose with an aldehyde group, fructose (levulose) with a ketone group. Cane-sugar (saccharose), maltose, milk-sugar (lactose), and melitriose, are condensation products of the simpler sugars. The sugars also retain the characteristic properties of aldehydes and ketones in their compounds with phenylhydrazine, hydroxylamine, ammonia (glucosamine), and hydrocyanic acid. Cellulose, starch, gums, and dextrine are anhydrides of the sugars.

By oxidation of the aldehydes the remaining hydrogen atom attached to the oxygenated carbon atom is replaced by a hydroxyl group, and acids obtain. Organic acids are composed of two parts, the acid or carboxyl group (COOH) and the alkyl group. Acids may contain one or more carboxyl groups, as monobasic, dibasic acids, &c., and the alkyl groups may contain a number of other substituting elements or groups. The most common monobasic acids are acetic, propionic, butyric, valeric, palmitic, and stearic acids, and the unsaturated crotonic, angelic, and oleic acids, from which are derived trichloroacetic acid, lactic (oxypropionic) acid, gluconic acid, the aldehydic-glycuronic acid, and the ketonic aceto-acetic acid. The dibasic acids are oxalic, succinic, adipic, and their oxy derivatives, the malic (oxysuccinic), tartaric (di-oxysuccinic), saccharic, and mucic acids. The principal tribasic acid is the oxy-acid citric acid.

Besides these halogen and hydroxyl substitution-products of the acids, several other important classes of compounds are formed by reactions with the carboxyl group, in which either the hydrogen atom or hydroxyl group is readily replaceable. Metals presented in the form of hydrates naturally replace the acid hydrogen, giving mineral salts, and in the presence of certain reagents the same can also be effected by the alkyl radicals of alcohols, producing esters. Many of these esters, which are frequently erroneously called "ethers," like acetic ether, have a very pleasant fruity odour and flavour, and those of the complicated acids, as aceto-acetic acid, are very stable compounds. Whilst polybasic acids can have one or more of their acid hydrogens replaced by alkyl groups, so polyhydric alcohols can combine with one or more carboxyl groups of one or more acid molecules. The natural fats are frequently of this nature. Spermaceti is palmitic acid cetyl ester, olein is a glycerine trioleate, stearin a glycerine tristearate. The process of decomposition into the acid and alcohol by the action of alkalis, acids, or steam is termed saponification, and is occasioned by the absorption of one molecule of water (hydrolysis).

The ethers proper differ from the esters in that the alkyl group substitutes the hydrogen atom in the hydroxyl group of an alcohol and not of an acid, and the resulting compound is not saponifiable. They are often regarded as the alkyl oxides corresponding to the alkyl hydroxides (alcohols), as ethyl ether $[(\text{C}_2\text{H}_5)_2\text{O}]$ to ethyl alcohol $(\text{C}_2\text{H}_5\text{OH})$. If the oxygen atom be replaced by a sulphur atom, the corresponding thio ethers or sulphides are produced, and as sulphur is capable of exerting two or four more affinities, by oxidation, one or two atoms of oxygen are taken up yielding respectively sulphines and sulphones. Sulphonal is a dimethyl-methane-diethylsulphone, trional and tetranol the corresponding mono- and di-ethyl derivatives.

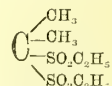
Besides the substituting groups already mentioned, the radicals of nitric, nitrous, and sulphuric acid, the nitro (NO_2), nitroso (NO), and sulphonic acid groups (SO_3H) respectively, and the reduction products of these, the amido (NH_2) and imido (NH) groups are also of first importance.



Methane.

Methyl chloride
(mono-chlor-methane).Methyl alcohol
(mono-hydroxy-methane).Chloral hydrate
(trichlor-methyl-di-hydroxy-methane).

Methylal (di-methoxy-methane).



Sulphonal (di-methyl-di-ethyl-sulphone-methane).

as ethyl and butyl nitrite, but different completely in properties. Nitroglycerine is also an ester of nitrous acid.

To the amido derivatives belong the so-called bases in which alkyl hydrogens are replaced, as methylamine, in which, again, further hydrogen atoms of the amido group can be replaced by fresh alkyl groups, as in trimethylamine. The most important amido derivatives are, however, found amongst the acids, and constitute two classes. In glycocoll (amido-acetic acid), betain (trimethylglycocoll), alanin (amido-propionic acid), leucin (amido-caproic acid), and asparaginic acid (amido-succinic acid), the amido group enters into the alkyl radical of the acid; in urea and its analogues it substitutes the hydroxyl group of the acid. Acetic acid yields acetamide, the dibasic carbonic acid a mon-amide (carbamic acid), and a di-amide (urea). The esters of carbamic acid are known as urethases, the ethyl ester as ethyl urethane.

Urea and its homologues are capable of forming compounds with acid radicals called ureides, of which many are known. The dinreides, into the composition of which two molecules of urea enter, form the uric-acid group, of which xanthine, theobromine, caffeine, and uric acid are the principal members. Guanidine and its derivatives kreatine and kreatinin are also ureides in which the oxygen atom of urea has been replaced by an imido group.

AROMATIC COMPOUNDS.

Hitherto we have considered carbon compounds in which the branching system has been in a more or less straight direction, but a larger and in many respects more important series is found in the so-called ring or aromatic, as distinguished from the chain or fatty, compounds. If, as in the branch system of many inflorescences, the lateral branches on one side of the axis be always developed in preference to the other, a circular form is assumed, and this is identically what happens amongst the aromatic compounds, the two terminal carbon atoms joining to complete the ring, or some other element, as nitrogen, acting as the connecting-link. These ring-bodies are characterised by great stability.

Pyrrol is a ring-body of four carbon atoms and one nitrogen atom to each of which a hydrogen is attached. In iodo (tetraiodopyrrol) four of the hydrogen are replaced by four iodine atoms. Antipyrin is a modified pyrrol body having one of the carbons replaced by a second nitrogen atom, and containing two methyl and one phenyl groups. Salipyrin is the salicylic-acid salt.

Thiophene is an analogous compound of four carbon and one sulphur atoms. The sulphonate, in which one of the hydrogen atoms is replaced by the sulphonic-acid group, is the most important derivative.

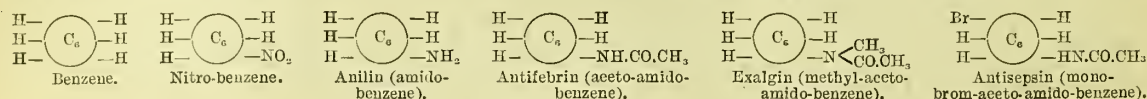
Benzene is, as is well known, formed in the same manner from six carbon atoms, one branch in each case being suppressed or forming a double bond, and the fourth being combined with a hydrogen atom. The readiness with which the latter can be replaced without affecting the nucleus accounts for the vast number of benzene derivatives known. In all carbon compounds numbers or letters of the Greek alphabet are frequently employed to indicate individual carbon atoms in the molecule that may be referred to, or in which substitution is effected, count being taken from the characteristic group in the compound, as from the carboxylic group in acids. In benzene and its ring-analogues, however, the terms ortho, meta, and para are also employed to denote whether substitution has been effected respectively in two adjacent, intermediate, or opposite carbon atoms, thus giving rise to three distinct series of di-substitution products that vary much in chemical and pharmacological action.

By the action of sulphuric acid on benzene the sulphonic acids, and by the action of nitric acid the nitro derivatives, are obtained, hydrogen atoms being replaced respectively by

The nitro derivatives of the hydrocarbons are isomeric with the nitrous-acid esters of the corresponding alcohols,

sulphonic acid and nitro groups. By the reduction of the nitro compounds the corresponding amido derivatives or

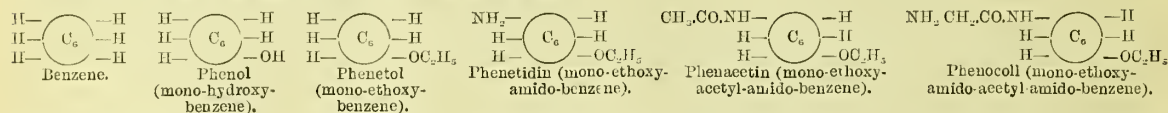
amines result, as aniline (amido-benzene) from milbare oil (nitro-benzene). Either or both of the two hydrogen atoms in the amido (NH_2) group may be replaced by other radicals as in antifebrin (acetanilide or aceto-amido-benzene). From the di-nitro derivatives the di-amido compounds are obtained as meta-phenylene diamine (di-amido-benzene) from di-nitro-benzene. By the introduction of the second amido group in place of a hydrogen atom of the first amido group, phenylhydrazine is obtained, and by substitution in the second amido group such bodies as pyridin or hydracetin (acetyl-phenylhydrazine) result.



Phenols are benzene derivatives in which one or more hydrogen atoms are replaced by hydroxyl groups. Carholie acid or phenol is mono-hydroxy-benzene, kresol methyl-phenol, and thymol propyl-kresol. The three isomeric dioxy-benzenes of the ortho, meta, and para series respectively, are pyrocatechol, resorcinol, and hydroquinone. Pyrogallol and phloroglucinol are isomeric trioxybenzenes. Some of the hexaoxybenzenes approach very closely to the sugars in character and have the same empirical formula— $\text{C}_6\text{H}_{12}\text{O}_6$.

Derivatives of the phenols may either contain the substituting radical in the hydroxyl group or in the benzene nucleus. In the ethers anisol and phenetol, the hydroxyl hydrogen of phenol is replaced by methyl and ethyl groups respectively. Nucleus substitution derivatives are aseptol or sozolic acid (phenylsulphonic acid), soziodolic acid (iodo-phenylsulphonic acid), picric acid (tri-nitro-phenol), phenetidid (amido-phenol), phenacetin (acetyl-phenetidid), anisidin (amido-anisol), methacetin (acetyl-anisidin).

The aromatic aldehydes are produced by the replacement



of the benzene hydrogen by aldehydic groups. Benzoic aldehyde (bitter-almond oil) is the simplest member; salicylic aldehyde is its mono-hydroxy derivative. Vanillin is the methyl ether of protocatechuic (dioxybenzoic) aldehyde. These aldehydes retain the characteristic chemical properties of the corresponding fatty compounds. Salicylic aldehyde combines with methyl-phenylhydrazine to form agathin (salicyl-methyl-phenylhydrazine).

Corresponding to the aldehydes are the acids. Benzoic acid is benzene mono-carboxylic acid, and contains the benzoyl ($\text{C}_6\text{H}_5\text{CO}$) group. Hippuric acid is benzoyl amido-acetic acid. By the action of sulphuric acid on benzoic acid sulpho-benzoic acids are obtained, the imide of the ortho acid being saccharin. Salicylic acid is ortho-oxy-benzoic acid, and salol its phenyl ester. A dioxy-benzoic acid is protocatechuic acid, and gallic acid a trioxy-benzoic acid. Acids with more than one carboxylic group replacing the benzene hydrogen atoms also occur, as the dibasic phthalic acid, which forms anhydride products with the phenols.

Ring-bodies, like benzene and its analogues, form condensation products, in which partial coalescence of the rings takes place, and growing side by side they form fresh nuclei, from which a fresh series of derivatives, corresponding to those of benzene, are obtained. By coalescence of the benzene and pyrrol rings, indol is produced, of which skatol is the methyl derivative. Of the compounds of benzene with benzene rings, naphthalene (two rings) and anthracene (three rings) are the most important. Alpha- and beta-naphthol correspond to phenol. Betol is the beta-naphthyl ester of salicylic acid. By the oxidation of anthracene the hydrogen atoms of the two middle carbon atoms are replaced by hydrogen, yielding anthraquinone. Alizarine is dioxy-anthraquinone, chrysophanic acid methylidioxy-anthraquinone.

ALKALOIDS.

Besides the rings composed of six carbon atoms, several important series of basic compounds, to which the alkaloids

are allied, contain five carbon atoms and the nitrogen atom, which yield derivatives and condensation products like benzene. Pyridine corresponds to benzene, chinoline is produced by the coalescence of a benzene and pyridine ring. These compounds are also characterised by the readiness with which the latent branches in the ring-formation become active again and attract hydrogen. Piperidine is thus a hexa-hydro-pyridine, conine is propyl-piperidine, whilst nicotine, cocaine, and morphine are also hydrated pyridines. As synthetical hydrides of chinoline, kairin and thallin may be mentioned—the first an ethyl-oxy-tetrahydro-chinoline, the

second an oxy methyl-tetrahydro-chinoline; whilst quinine and strychnine, as well as papaverine, hydrastine, and narcotine, are derivatives that occur in the vegetable kingdom. Analgene is oxy-ethyl-acetyl-amido-chinoline.

In this short sketch of organic chemistry it has been impossible even to mention whole groups of important compounds, as the dyes and the constituents of essential oils, but it will have effected its purpose if it indicates the facility with which an insight into the constitution of the complicated new remedies may be attained without digressing to consider the methods by which substitution and changes may be most easily effected. Without the use of formulae a very good conception of the intricacies of chemical synthesis may be obtained by studying the branching in angiosperms, and noting the developments in certain directions, whilst other branches terminate or are completely suppressed. In fact, the arrangement of the leaves on a stem, or phyllotaxis, enables the class of isomerism known as stereo-chemical or

optical to be more readily understood than any graphic formulae on paper.

Gazette.

PARTNERSHIPS DISSOLVED.

Arkle, A., and Arkle, C. A., under the style of Barnes & Son Preston, chemists and druggists.

Eyton-Jones, Thomas, and Drinkwater, Harry, Grosvenor Lodge, Wrexham, Denbighshire, physicians.

THE BANKRUPTCY ACTS, 1883 AND 1890.

RECEIVING ORDER.

Purrett, John, Worle, near Weston-super-Mare, manufacturing chemist.

ADJUDICATION.

Purrett, John, Worle, near Weston-super-Mare, manufacturing chemist.

ORDER MADE ON APPLICATION FOR DISCHARGE.

Fry, Samuel Herbert, trading as the Fry Manufacturing Company, Chandos Street, Charing Cross, and Kingston-on-Thames, dry-plate maker; discharge suspended for two years, ending November 17, 1894.

ON the principle that it is better late than never, the Austrian *Pharmaceutical Journal* has got the length of recording the fact that the British Pharmaceutical Conference met in Edinburgh at the end of August, and the items of interest which are picked out are the death of Professor Redwood and Mr. Hyde Hills; five lines to Mr. Stanford's address, papers by "Griessow," &c.

The Winter Session.

GLASGOW PHARMACEUTICAL ASSOCIATION.

At a meeting of this Association held on December 22—Mr. W. L. Carrie, President, in the chair—Mr. MOIR submitted the resolution passed at the previous meeting in support of the scheme of

TERRITORIAL REPRESENTATION

on the Pharmaceutical Council, which he moved should be sent to Mr. Thompson. Mr. BOYD seconded, and the motion was carried unanimously.

PROPOSAL TO EXTEND THE GLASGOW ASSOCIATION.

The CHAIRMAN said it had been suggested that they should ask every chemist and druggist in the West of Scotland to join the Glasgow Association. He proposed that at the annual meeting in April they should alter their designation to the "Glasgow and West of Scotland Pharmaceutical Association." He submitted a draft circular, which was approved and ordered to be sent to druggists in the West of Scotland.

UNQUALIFIED DRUGGISTS.

Mr. LAING next moved "That whereas it has been found that persons who are not registered under the Pharmacy Act have been selling poisons illegally, the general public being deceived by the studied similitude in appearance between the fraudulent imitation of the shops of the registered chemists and druggists, we desire that such illegal trading be prohibited by the compulsory closing of such shops upon conviction or without conviction, when poisons form part of their stock-in-trade; otherwise, if the Poisons Act is not necessary as a public safeguard, we desire it to be repealed and free trade in poisons acknowledged in law, as it is practised now out of law." Mr. Laing advocated his resolution, and proposed that it should be forwarded to the Pharmaceutical Society.

Mr. ROBINSON seconded.

Mr. RUSSELL moved, as an amendment, "That we, the Glasgow Pharmaceutical Association, heartily sympathise with the Council in its endeavour to have the pharmacy laws duly observed, deeply deplore the lamentable condition of pharmacy in Glasgow as represented by the great number of drug-shops, the business in which is conducted by unqualified persons, and hereby express to the Council our desire to assist as we best can the Society in the removal of this evil from our midst and in the improvement of pharmacy generally."

This motion was not seconded.

Mr. BOYD said that what the resolutions both of Mr. Laing and Mr. Russell aimed at was included in the resolution submitted by Mr. Moir and agreed to. He accordingly moved the previous question.

The PRESIDENT seconded, and remarked that the Association ought not to individualise itself too prominently.

On a division the previous question was carried by seventeen votes against two for Mr. Laing's motion.

This concluded the business.

ABERDEEN CHEMISTS' ASSISTANTS' ASSOCIATION.

On Thursday, December 22, the members of this Association held an "At Home" in the Queen's Rooms, Union Street. Mr. A. L. STRACHAN, President, in his opening remarks, stated that this session the attendance had been very satisfactory, and there seemed to be a tendency to discuss more fully than in previous sessions both literary and scientific subjects. The lively interest shown by the members of the senior Association in the welfare of the young men's Association indicated the friendly feeling that existed between employers and employed. During an interval in the musical programme refreshments were served, and those present had the opportunity of inspecting a collection of hotanical specimens arranged by the summer class. The President's silver medal for the best collection was won by Mr. Fraser. Mr. J. Clark acted as leader of this class.

Recent Patent Specifications.

Linen glaze.

Mr. C. H. Huss and Mr. A. Viner, both of Cardiff, state in their specification (No. 13,328, 1892) that the following compound is applied to the linen with a sponge or the like after ironing, and the linen is again ironed:—

	Oz.
Saltpetre	$\frac{1}{4}$
Borax	$\frac{1}{4}$
Water	16
Glycerine	$\frac{5}{8}$

Dissolve the salts in the water and add the glycerine.

Asthma, &c., Pastilles.

The following very long formula is submitted by Mr. H. Hammer, of Dresden (specification No. 13,368, 1892):—

Ambre grisæ, 0·1; moschi, 0·2; cort. cinnam. cass., 2·5; caryophyll 2·0; maceis, 5·0; cardamom, 1·0; rhiz. irid., 4·0; rad. pimpinell, 20·0; bulb. scill., 5·0; stib. sulph. aur., 7·5; ammon. chlorat., 15·0; acid. salicyl., 2·5; saccharin, 6·0; sacchari albi, 250·0; extr. quebracho sicc., 25·0.

The extract of quebracho is made by eight days' maceration of quebracho blanco, 10 parts in 50 parts spirit and 50 parts white wine, filtering and evaporating the tincture, dissolving the residue in water, filtering, and evaporating to dryness.

The above-mentioned powders are well mixed and worked into a pastille-mass with a liquid consisting of:—

Tinct. pimpinella (prepared by the digestion of the root of <i>Pimpinella saxifraga</i> , Linn., in 5 parts spirit)	5·0 grammes
Tinct. opii. benz., Ph.G.	5·0 "
" opii croc... .. .	5·0 "
" lobelia infl.	5·0 "
" ambre grisæ	0·5 "
Chloroform.	10·0
Ol. cinnam. cass.	gtt. iv.
" anis.	gtt. iij.
" bergamott.	gtt. viij.
" m. pip.	gtt. xvi.
Vanilla	0·2

The mass is to be divided into pastilles half-a-gramme in weight. These pastilles are for asthma, catarrh, and cough.

Granular Effervescent Mixtures.

Mr. Thomas Kerfoot, of Manchester, proposes to avoid the loss of carbon dioxide in making such preparations as the above in the following manner, viz.:—The acid ingredients (say, acid, tartaric or citric, 10 parts; sugar, 5 parts) are mixed with enough water to make a stiff mass, granulated, and dried at 100° F. Similarly the alkaline constituents (say, sodæ bicarb., 10 parts; sugar, 5 parts; magnes. sulph., 2 parts) are granulated, and the dried granules of each kind are afterwards mixed in suitable proportions.

SOMETHING MIGHT BE MADE OF IT.—A correspondent of the *Confectioners' Journal* says that banana-juice makes a first-class indelible ink. A spot on a white shirt from a dead-ripe banana is marked for ever, and the juice from bananas thoroughly decayed is a bright, clear carmine.

He first asked for a bottle of "mutton, tin and rum," and as that did not hit the mark he tried the druggist with "veal, copper and gin," but that did not fetch him either. "Pork, silver and brandy," "chicken, lead and mercury" were quickly fired off, and as the customer seemed to be losing his temper and the druggist his patience, they compromised with "beef and iron wine."

COD-LIVER OIL was used in the Manchester Royal Infirmary in 1776 for the treatment of rheumatism. The dose given at the beginning of this century was $\frac{1}{2}$ oz. to 1½ oz. twice a day, and warm beer was considered the best vehicle for it. The consumption of cod-liver oil in the Manchester Infirmary from the year 1776 to 1807 averaged 50 to 60 gallons annually. It now amounts to 400 gallons.

TRADE-MARKS APPLIED FOR.

ANY person who has good grounds of objection to the registration of any of the following marks should at once communicate with Sir Reader Lack, Comptroller-General, at the Patent Office, 25 Southampton Buildings, Chancery Lane, London, W.C.

(From the "Trade Marks Journal," December 7, 1892.)

Device of three squares interlocked and arrow-head; for chemical substances used in medicine and pharmacy. By Boot's Pure Drug Company (Limited), Nottingham. 158,925.

Device of demon eating from bowl, and sun in background; for chemical substances used in medicine and pharmacy. By F. W. Bates, 178 Chorlton Road, Brook's Bar, Manchester. The essential particular is the device. 167,317.

"VIKING"; for chemical substances used in medicine and pharmacy. By Idris & Co., 10 Ascham Street, Kentish Town, N. 167,789.

Device of bottle-stopper, signature and wording; for bottle-stoppers made principally of glass. By W. P. Bonwick, 59 Blomfield Road, Maida Hill, London. The essential particular is the signature. 166,983.

Device of letters "H. B. and B." and life-buoy; for tooth-powders, tooth-pastes, dentifrices, hair-restorers, perfumes, toilet articles, &c. By Humphries, Barraclough & Brown, 25 Grace Street, Leeds. The essential particular is the device. 165,386.

"BREIDENBACH, LONDON"; for perfumery. By R. B. Breidenbach, trading as Breidenbach & Co., 48 Greek Street, Soho Square, London. 165,721.

"GOLDEN CLOUD"; for perfumery, toilet articles, &c. By J. C. Allardice & Co., Bond Street, Belfast. 166,956.

(From the "Trade Marks Journal," December 14, 1892.)

"BULL-DOG," and device of animal with bull-dog's body and bull's head and horns; for medicines for veterinary purposes. By J. E. J. Bonn, High Street, Brading, Isle of Wight. The essential particular is the device. 167,538.

"CANTHARINE," and signature; for a preparation for destroying insects in birds and animals. By R. A. Hyde, trading as R. Hyde & Co., 1 Paulet Road, Camberwell, S.E.

"PIPERAZIN," and wording on triangular label; for a chemical compound known as "Piperazin," and used in medicine and pharmacy. By E. Schering, 170 Müllerstrasse, Berlin, N. The essential particular is the distinctive label. 166,600.

"BELVID"; for an ointment for wounds, cuts, sores, burns, &c. By A. Roth and Adolph Roth, trading as Roth Brothers, 133 Dawes Road, Fulham, S.W. 167,298.

"ZOMAH"; for medicinal preparations. By M. A. Lilly, 35 Colston Street, St. Augustine's, Bristol. 168,120.

"VANONAH"; for a liquid external remedy for headache and insomnia. By A. B. Cruikshank, 24 Great Western Road, Westbourne Park, London. 168,210.

"MILO," and device of male figure holding bull on shoulders; for extract of meat. By Wedekind & Co., 5 Great Tower Street, E.C. The essential particular is the device. 167,982.

Sketch of bird, and signature; for aerated waters. By G. & C. Moore, Mordaunt Street, Glasgow. 167,333.

"NOSWALFA"; for mineral and aerated waters. By Lawson Bros., 14 Chapel Street, Greenock. 168,218.

"ANDRÉ LISTORI," as signature; for tooth-powder. By A. Listori, 18 Lindore Road, Battersea Rise, London. 168,085.

(From the "Trade Marks Journal," December 21, 1892.)

Device of shears, for sheep washes or dips. By Battle, Maltby & Bower, Lincoln. 168,171.

"LIMGILI"; for a medicine for dysentery and diarrhoea. By H. J. McCubbin, trading as McCubbin Bros., 35 Ludgate Hill, Birmingham. 167,119.

"HOLDINE"; for an asthma and bronchitis remedy. By A. C. Cohen, 40 Priory Road, West Hampstead, London. 167,632.

Device of page-boy holding packet of tea; for tea. By Jane Adamson, trading as the Manchester and District Tea-supply Company, 33 Richmond Street, Ashton-under-Lyne. 158,106.

Device of a target on a stand, with arrow piercing bull's-eye; for teas. By Arthur Brooke, trading as Brooke, Bond & Co., 17, 18 St. Dunstan's Hill, London. 164,785.

"SMITH," with arrow through the lettering; for a sauce. By Abraham Arrowsmith 8 St. Ann Road, Hornsey, London. 167,492.

"TANOCEA," with device of three T's in triangle; for tablets or powder for adding to infusion of tea to improve flavour and digestibility. By Charles Brooke Waller, Bingham, Notts. 167,868.

Device, monster with human face; for tea. By Thomas William Jones, 11 East Ascent, St. Leonards. 168,374.

Device of bird in rough outline; for mineral and aerated waters. By Robert Rich, East Hagbourne, Berkshire. 167,140.

"E. WARD" in signature; for mineral and aerated waters. By Ernest Ward, trading as the Paignton Mineral-water Company, Paignton, Devon. 168,088.

Device of coat of arms in clasp, with name of company; for mineral and aerated waters. By the Aberdeen Aerated-water Company (Limited), Aberdeen. 168,107.

(From the "Trade Marks Journal," December 28, 1892.)

Device of soldier's head with background of feathers, with chain and star bearing the word "Antifouling"; for paints. By Emily Stephenson, Landport, Hants, and Major-General J. F. Crease, C.B., Comberton Hall, Kidderminster. 164,762.

Device of glue-pot; for glue. By William Revell White-lock, 58 Boar Lane, Leeds. 167,543.

"INVALID'S WINE," and other wording on device, with ornamental label; for a medicated wine for invalids. By D. Sutherland, trading as Hughes, Morris & Co., 4 Savoy Street, Strand, London. 164,648.

"DOCTORS' STOUT," with device of man holding glass; for a medicinal beverage for human use. By Robert Emmerson, jun., 78 Scotswood Road, Newcastle-on-Tyne. 167,999.

"YOZOL," in writing-characters; for a medicine. By the Yozol Company, 70 Fortune Green Road, West Hampstead, London. 163,524.

"TOPICAL" tea, with label; for tea. By Griffiths & Maw, 52 Lime Street, E.C. 166,573.

"FAIRY," with figure and other wording, on ornamental label; for a baking-powder. By Marmaduke Wray, trading as the Fairy Baking-powder Company, Beverley. 167,171.

"SPARTAN SAUCE," with device of head of Greek warrior and other matter, on ornamental label; for a sauce. By John Maynard & Co., 50 Ifley Road, Hammersmith. 167,824.

"PASS IT ON"; for mineral and aerated waters. By William A. Lawton, 174 Fleet Street, London. 167,917. Ditto; for candles, common soap, and oils. 167,919.

Device of Milton's bust; for mineral and aerated waters. By William Delamark Jackson, Milton, next Sittingbourne, Kent. 168,409. Ditto; for perfumery. 167,920.

"LESSIVE PHÉNIX," with device of girl at washing-tub, and signature; for a washing-powder. By Jules Picot, 71 Rue de l'Ecliquier, Paris. 167,135.

Device of ruin of Ashby Castle; for a soap-powder. By the New Hydroleine Company (Limited), Ashby-de-la-Zouch. 168,235.

"SERONIS"; for a laundry preparation. By William Cantrell, 136 Camp Road, Leeds. 168,481.

The London Drug Market.

43 CANNON STREET, E.C., December 29

On Thursday next, January 5, the first drug-auctions of the New Year will be held, and until that time there will be no serious resumption of business in the London wholesale drug-markets. Among the fluctuations which call for attention this week, the following are the most important:—*Opium* remains very firm, and a fair business is reported at 8s. 6d. for Karahissar and at 9s. per lb. for Tokat. From Smyrna we receive confirmation (dated December 17) of the decline in the opium market, already announced by cablegram by our correspondent. The weather in the growing-districts, it is stated, is as satisfactory as possible, and the entire sowings have now been put in the ground. It is said that the sowings are quite as extensive as those of last year, and that there is no reason at present to fear any falling-off in the production on this account. *Quicksilver* remains sluggish, at 6l. 2s. 6d. per bottle from the importers, and 6l. 1s. 6d. in second hands. In Liverpool *Castor oil* remains firm at 2¹¹/₁₆d. per lb. for good Calcutta seconds, and 2¹/₁₆d. to 2¹¹/₁₆d. per lb. for first-pressure French oil. In Calcutta, on December 7, there was a strong demand for this oil, with fairly brisk sales for export to the United Kingdom and colonies, and small stocks. The prices of fine eating *Olive* oils rule very high, and the stock here is stated to be very slight. Fine is held for 5s. 6d. to 6s.; good for 4s. 6d. to 5s. per gallon, with prospects of a further rise shortly. Manufacturing oil is tending easier in Liverpool, where rather heavy arrivals have been received from Spain. The values there fluctuate from 35s. 6d. for Syrian to 39s. per cwt. for best Neapolitan oil. London is unaltered, Spanish oil being nominally 33s. per cwt. *Japan wax* is well maintained in price, good pale squares selling steadily at 40s. It will be observed that our New York correspondent wires that *Iodine* is offering there at a decline in price. This would appear to point to a breakdown of the syndicate. The London agent of that organisation tells us that he "has nothing new to say, and does not anticipate any change," while from other sources we hear that the combination "will certainly be renewed." *Cottonseed* oil is dearer all round. American so-called "salad oils" are held at 2s. 8d. to 2s. 10d. per gallon for non-congealing, and at 2s. 4d. per gallon for summer oil. *Quinine* remains stationary but firm. German second-hand in bulk might probably be bought on the spot at 9³/₄d. per oz. Small sales of Cartagena *Ipecacuanha* have been made at 4s. 4d. to 4s. 6d. per lb. for fair quality. *Camphor* keeps firm at 1s. 11³/₄d. per lb. for German refined. English is unchanged. New *Malta orange peel* has been sold at 2s. per lb., but some is now offering at 1s. 10d. per lb. *Carbolic acid* keeps up well at 8³/₄d. to 6³/₄d. for 39°-40°, and 5³/₄d. to 5¹/₄d. for 32°-35° crystals. Liquid 95-97-per-cent. is scarce at 1s. 8d. to 1s. 8d. per gallon. With regard to other tar products, *Pitch* and *Creasote* are somewhat easier. *Sulphate of ammonia* is also tending towards lower rates, while *Carbonate* remains low in price at 3d. per lb. *Miscible wood naphtha* is rather firmer at 4s. 6d. per gallon, but *Solvent naphtha* may be had at 3s. 10³/₄d. per gallon. *Tartaric acid* moves between 11d. for second-hand foreign and 12d. per lb. for B.P. English acid from the makers; for *Citric acid* 1s. 5³/₄d. per lb. is the nearest price. *Cream of tartar* remains very quiet at 81s. to 82s. per cwt. for best French crystals. Powder is held about 2s. per lb. above that figure. *Caustic soda* has become very flat indeed, and the f.o.b. Liverpool quotations to-day are 10l. 5s. for 70-per-cent., and 8l. 15s. for 60-per-cent.; on the Tyne 76 77-per-cent. offers at 11l. 5s., f.o.b., on the spot. For contracts over 1893 prices are 20s. per ton below these quotations all round. *Soda crystals* offer at 62s. 6d. ex ship, or 65s. landed terms, and *Bleaching powder* is worth 8l. 5s. to 8l. 10s. on the spot. *Sulphate of copper* is very firm at 15l. 15s. to 16l. 5s. per ton, according to brand. *Shells*.—At the conclusion of the holidays this market reopened with a strong and active feeling, and sales have been made of free AC garnet at 82s., blocky ditto at 81s., and third *Button lac*, unworked, at 77s. to 86s. per cwt., according to quality. The speculative market is firm, with small sales of second *Orange lac* TN

for January delivery at 92s., and for March at 94s. per cwt. In *Spices* little business has been done. *Cochin ginger* has sold at higher prices—viz., 53s. to 54s. per cwt. for washed rough, and Bengal is worth 40s. to-day. *Zanzibar Cloves* have fluctuated so far as the delivery market is concerned, while on the spot they remain dull. The sales include fair quality on the spot at 3⁷/₁₆d. to 3¹/₁₆d. November-January steamer 3⁵/₁₆d. to 3¹/₁₆d. per lb. c.i.f. terms. delivered weights, and for delivery January-March and February-April at 3¹¹/₁₆d., rising to 3¹³/₁₆d. per lb. The market is strong and active at the close. *White pepper* keeps firm, with very little business at 3¹/₁₆d. for Penang. *Black Singapore* is worth from 3³/₁₆d. to 3¹/₁₆d. per lb. Good fair *Singapore Tavioca* sells at 1⁷/₁₆d. per lb. Fine *Para Indian rubber* keeps firm at 2s. 10d. per lb. on the spot. In the *Tea* trade there are no Ceylon sales till January 2 and no Indian sales till January 3. There was quite a small "boom" on the terminal market at the end of last week, December and January Indians being done at 8⁸/₁₆d. and April at 8¹⁰/₁₆d.

Java Cinchona and Cubebs.

The exports of cinchona and cubebs from Java during the four months from July 1 to October 31 have been:—

	1892	1891	1890	1889
Cubebs piculs.	1,198	714	360	303
Cinchona, Government plantations .. lbs.	204,435	288,751	64,208	231,410
Cinchona, private plantations lbs.	2,040,943	3,488,974	2,035,890	1,650,838
Total	2,245,378	3,777,725	2,100,098	1,832,493

The quality of the casia oil which has recently been brought to market in Hong Kong has proved extremely unsatisfactory; the highest quality (No. 1) is wanting altogether, and the percentage of cinnamic aldehyde in parcels pretending to answer the test (70 per cent. is required to attain the standard) is greatly deficient.

Stoppage of Caustic-soda Manufacture.

The United Alkali Company have issued orders to the managers of their works that on December 23 the plant for the manufacture of caustic soda should be stopped for an indefinite period. In Widnes, the chief centre of manufacture, this means the total stoppage of two, and the partial stoppage of several other, factories, in consequence of which over 1,000 men will be thrown out of employment. The period of stoppage is understood to extend to six weeks at least. The large accumulation of stock is the reason for the suspension of the manufacture, paper-makers and soap-makers having for some months used carbonated ash instead of caustic in their processes.

The Chamber of Arbitration.

A list of persons nominated by the London Chamber of Commerce to serve as arbitrators to this Chamber has just been published. The following are the names of those connected with the drug and chemical trades:—*Drugs*: R. B. Barron, 6 Giltspur Street, E.C.; Thos. Christy, 25 Lime Street, E.C.; A. B. Hill, 101 Southwark Street, S.E.; and F. H. Lescher, 60 Bartholomew Close, E.C. *Chemicals*: Thos. Bennett, 29 Mining Lane, E.C.; W. G. Blagden, 4 Fenchurch Avenue, E.C.; Bernard Dyer, 17 Great Tower Street, E.C.; D. W. Greenhough, 5 Rood Lane, E.C.; A. B. Hill, 101 Southwark Street, S.E.; Beaudict Kimo, 30 St. Swithin's Lane, E.C.; Thos. Tyrer, Abbey Lane, Stratford; Chas. Umney, 50 Southwark Street, S.E.; and Chas. Wightman, 1 Fenchurch Avenue, E.C. *Oils*: E. Dowling, 83 Cable Street, E.; E. R. Goodrich, 352 Mile End Road, E.; Jasper Knight, South Sea House; Wm. Love, Devonshire Chambers, Bishopsgate Street; A. J. Moore, Billiter House, E.C.; B. Norton Redwood, 4 Bishopsgate Street, E.C.; and John Weston, Ball Street, Stepney. *Photographic Trades*: Wm. Grove, 63A Baker Street, W.; H. S. Mendelssohn, 14 Pembroke Crescent, W.; Henry Vaederweyde, 182 Regent Street, W.; T. P. Watson, 313 High Holborn, W.C.; and L. Warnecke,

"Silverhome," Champion Hill, S.E. *Perfumery*: R. B. Breidenbach, 48 Greek Street, Soho, W.; and C. A. Gosnell, 93 Upper Thames Street, E.C. *Varnishes*: R. Ingham Clark, 18 St. Helen's Place, E.C.; J. R. Hoare, 3 Cornwall Road, S.E. *Soap*: John Calderwood, Belmont Works, Battersea; Edwd. Rider Cook, Bow, E.; Chas. J. Cross, Brentford; W. Duncan Knight, Silvertown, E.; and Edwd. Simpson, Wakefield. *Mineral Waters*: W. G. Cormack, Dixon Road, New Cross, S.E.; Jas. Johnson, 150-152 Bardett Road, E.; W. Adpar Jones, Pratt Street, Camden Town; G. Norrish, 9 Bomore Road, Notting Hill, W.; and H. Steinem, Lea Bridge Road, Clapton, N.E.

The Fish-oil Market.

Menhaden fish oil is already very scarce, although the fishing season closed only a little over a month ago. There are (says the *New York Oil, Paint, and Drug Reporter*) about 1,100 barrels of southern and 800 barrels of northern oil still in first hands, but held at prices which practically exclude it from the market. A stock of 1,900 barrels of Menhaden oil is a mere bagatelle compared with the estimated requirements of consumption until next spring, when new oil will be available. The short yield of oil is the more felt this year because the pressers carried over no stock to speak of from the preceding season. The necessity for securing supplies of other oils to make up the deficiency of Menhaden is making itself apparent. Only two kinds of such oils are available—viz., Alaska herring oil and Japanese fish oil. The latter was introduced several years ago, but did not give satisfaction, principally because of the way it was packed. There is no probability that it will be any more satisfactory now, as it still comes in second-hand 5 gallon kerosene cans, which are a nuisance to the users, who are puzzled to know how to get rid of them. So far as we have been able to ascertain, very little Alaska oil will come over. Several weeks ago about 100,000 gallons of it were offered in this market at 33c., which was considered much too high. Since then it has been sold, and it is believed that no more of it is obtainable. Regarding the Japanese oil, there is a report current that the catch was short this year, and as there is a ready and large sale of it in Europe there is little or none to spare for this market.

The Lagos Palm-oil Trade.

In commenting upon the great fluctuations in value shown by the export statistics of the colony of Lagos, Governor Carter states that these fluctuations are due entirely to the three causes connected with the palm-oil industry—viz., the rapid decrease in the price of palm produce owing to the competition of mineral oils; the effect of natural causes upon the productiveness of the oil-palm; and the eccentric conduct of the middlemen in the interior, whose exactions and arbitrary demands have, at irregular intervals, blocked the routes upon which the trade of the colony depends; for Lagos, in common with all West African colonies, exists only as a trading-station for the native producer, and depends to a large extent upon the palm produce obtained in the country of the surrounding tribes. In his most prosperous days (*i.e.*, about thirty years ago) the palm-oil shipper could realise as much as 52 $\frac{1}{2}$ per ton, while during the last ten years the price has almost constantly tended downwards. The following figures show the extremes of price (in England) of best Lagos palm oil per cwt. during the last ten years:—

	1882	1883	1884	1885	1885
	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>
Highest	36 3	42 3	40 3	29 0	20 0
Lowest	30 0	36 6	29 6	25 0	23 6

	1887	1888	1889	1890	1891*
	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>
Highest	27 1 $\frac{1}{2}$	21 0	23 9	29 0	25 0
Lowest	18 6	19 1 $\frac{1}{2}$	22 0	22 0	23 9

* First seven months.

The Amsterdam Cinchona Sales.

The bark auctions to be held in Amsterdam on January 12 will consist of 212 cases and 6,017 bales (about 530 tons), divided as follows:—From Government plantations, 49 cases and 324 bales (about 33 tons); from private plantations, 163

cases and 5,693 bales (about 497 tons). This quantity contains: Of *Druggists' bark*—*Succruba*, quills, 212 cases; ditto broken quills and chips, 176 bales; ditto root, 47 bales. Of *Manufacturing bark*—*Ledgeriana*, broken quills and chips, 4,280 bales; ditto root, 860 bales; *Officinalis*, broken quills and chips, 74 bales; ditto root, 19 bales; *Hybrid*, broken quills and chips, 499 bales; ditto root, 62 bales.

THE AMERICAN DRUG MARKET.

(Cablegram from our Correspondent.)

NEW YORK, Wednesday night.

THE *Peppermint-oil* market is lower, H. G. Hotchkiss's brand being now offered at \$2.50 per lb. There is also a break in *Iodine*, and *Damiana-leaves* are lower, at 18c. per lb. *Jaborandi-leaves* have also fallen in price, and are offering at 25c. per lb. Mexican *Vanilla* is again higher in price, while *Safflower* has also advanced. Summer-refined yellow *Cotton seed* oil has risen to 47c. per gallon.

THE SMYRNA OPIUM MARKET.

(Telegram from our Correspondent.)

SMYRNA, December 28.

THE transactions upon our market this week amount to 40 cases of fair talequale manufacturing opium, at 7s. 5d. to 7s. 6d. per lb., f.o.b. The position is unaltered.

BRITISH AND FOREIGN CONSULS' REPORTS.

COLOMBIA.

Copaiba The amount of *copaiba* exported from Maracaibo varies but little from year to year. *Inexhaustible*. There were shipped to the United States during 1891 24,046 lbs., of a declared value of \$12,768 97. There is no reason why ten times this amount should not be collected and exported annually, as the drug is practically inexhaustible in the forests of Zulua, where, indeed, other gums and balsams of great commercial value may be had for the gathering.

QUEENSLAND.

Arrowroot. This tuber was not so extensively planted in Queensland in 1891 as in the previous year, consequently the amount produced was also much below 1890, but the yield per acre on the area planted was very good—in fact, the average per acre was the best yet recorded. The following statement contains particulars relative both to the production and export of this commodity for the last ten years:—

Year	Production	Export	Value per Ton
	Lbs.	Lbs.	£
1882	253,492	225,219	35
1883	390,964	262,683	42
1884	574,768	302,584	44
1885	551,912	405,390	35
1886	463,900	211,636	38
1887	216,184	338,313	36
1888	254,870	318,044	33
1889	583,988	280,337	34
1890	712,144	354,427	31
1891	682,252	393,030	29

It appears unaccountable that this crop does not find more favour with farmers; it is as easily grown as maize and is very remunerative. On the basis of the average declared export value for the last five years, the crop of 1891, having been produced on an area of 237 acres, gives a return of 37 $\frac{1}{2}$ per acre, an amount which, after making all due allowances for cost and trouble of manufacture and packing, should leave a substantial profit to the grower.



Memoranda for Correspondents.

Always send your proper name and address: we do not publish them unless you wish: if you do not, please use a distinctive nom-de-plume.

Write on one side of the paper only; and devote a separate piece of paper to each query if you ask more than one, or if you are writing about other matters at the same time.

If you send us newspapers, please mark what you wish us to read.

Ask us anything of pharmaceutical interest: we shall do our best to reply.

Before writing for formulæ consult the last volume, if you have it.

Letters, queries &c., will be attended to in the order received.

Empties.

SIR,—In reply to letter signed "Reconciled," I cannot give him better advice than to send his orders to Evans, Sons & Co., Liverpool, who have for many years adopted the practice he suggests.

Yours, &c.,
5 Earl's Road, Liverpool, Dec. 28. R. G. SMITH.

SIR,—In reply to your correspondent "Reconciled," please allow me to remark that the firm I have the honour of representing (Messrs. Oldfield, Pattinson & Co., Manchester) have for at least the past ten years adopted the very expedient he suggests. We attach to the under surface of the lid of each hamper a small tally, which bears recorded on it whence it came, when, and how much charged.

May I, however, as an old credit clerk, venture to suggest that the blame for non-acknowledgment of returns not unfrequently rests with the sender; moreover, that a hamper kept under any circumstances for over twelve months is not thereby improved. I can bear in mind cases where clients zoologically disposed have utilised hampers for the detention of fowls and rabbits, and after a delay of a year or so have been very indignant at being told that the hampers were valueless. I recollect an unfortunate hamper being returned without a bottom, and being gravely informed that it had been received in that condition, although the contents weighed over 2½ cwt. Your correspondent must also remember that railway companies do not deliver returns with the celerity they do goods. They frequently store them until a vanload accumulates. My object in replying will be attained if I can show "Reconciled" that delays are less likely to occur in a well-organised wholesale house than through the somewhat perfunctory habits which unhappily characterise too many of our retail brethren. We make a rule here of sending away credit notes the same day that empties come to hand.

Faithfully yours,
FRED. D. CROSSLEY.

17 Todd Street, Manchester,
December 26.

"English" v. "Foreign" Manufacture.

SIR,—Some little time ago I drew attention to the expediency of a chemist being able to ascertain readily from the wholesale house with whom he may treat whether goods are of British or foreign manufacture—for instance, whether the "best camphor" offered is best English refined, "best tartaric acid" of best English or best foreign make, and whether in the case of methylated spirit, English grain spirit or sugar spirit (which is chiefly made abroad) is used, and English or foreign naphtha.

These inquiries should be made because in the majority of cases the English article is superior, and a retailer ought not to have the foreign article offered as "best" without being told it is "best foreign."

Now let me add another warning. Never in the course of twenty years have I had as many samples of foreign sublimed sulphur offered me as at present.

Not one of them after most careful investigation has come

up to the standard of a really first-class English sublimed article I have had for years; most of them are immeasurably inferior.

Yet the importers say this sulphur is largely purchased by wholesale druggists, who cannot resist the temptation of purchasing an oilman's article because it is 2s. per ton cheaper.

I submit, therefore, the retailer should know, and has a right to ask, if sublimed sulphur offered him be of English or foreign sublimation.

Yours truly,
December 27. WHOLESALE DRUGGIST. (196/19.)

Dublin Chemists and their Assistants.

SIR,—Your Dublin correspondent appears to suggest that principals here are endeavouring to introduce a new rule in not engaging an assistant who is in another's employment. For over thirty-five years I have known it to be the first principle among principals not to take, let alone solicit, an assistant from the employment of another until his engagement had terminated. I would like to know how the moral aspect is viewed elsewhere.

R. J. D. (197/7)

Fiat Haustus H. S. S.

The long and tiresome day is almost o'er;
With whitening, chloride, hair-oil, tubing pliant,
Blue butter, Epsoms, "rubob pills" galore,
I have relieved the woes of many a client.

A lady dressed regardless of expense
Called in just now, and for a comb she clamoured.
Said I, "A shilling, ma'am, or eighteenpence?"
"Oh, have you none at threepence?" "N—n—no," I
stammered.

I next received a paper from a boy,
Thinking, "By Jingo, here's a chance of profit!"
One glance at the "prescription" calms my joy;
"Borrick's, 1d." is the total of it.

My nut will soon be—as the Greeks say—cracked;
In many penn'orths there is much vexation;
All night I dream of pills and teats—in fact,
I'm selling day and night without cessation.

How now, my brave apprentice, staunch and true,
Attention pay to these my last reflections;
A desperate deed I am about to do—
Of pills I've had enough, likewise confections.

Hand me that gallon jar—heaven wills it so;
I must have done with all such botheration;
I'll quaff the contents—good mist. sennæ co.—
And so procure a little relaxation!

MANX GOVAG. (188/24.)

LEGAL QUERIES.

Consult Alpe's "Handy-book of Medicine-stamp Duty" in regard to patents medicine questions.

General information regarding the laws affecting chemists and druggists is printed in THE CHEMISTS' AND DRUGGISTS' DIARY, 1893.

For stamp duties, licences, Customs regulations, &c., see the DIARY.

193/23. *Mortar*—A chemist without a spirit-licence may not sell more than 8 oz. of spirit of wine to a medical man. See DIARY, &c.

193/63. *J. M.*—A registered chemist and druggist may legally describe himself as an analytical chemist.

193/17. *N. E. B.*—You would be unwise to write to the officer's superior about your debt. It would not be a nice course to take, and, besides, you risk a libel action. Your proper course is to sue for your debt in the usual manner.

197/38. *Inquirer*.—The Supplement to Alpe's "Medicine-stamp Law" may be obtained separately from this office, price 3d. An unregistered person may compound poisons with other ingredients. He may not sell them. The book you name is a good one.

193/53. *Kaska*.—The Commissioners of Inland Revenue do not require a licence for armorial bearings to be taken out by shopkeepers "in respect of the use of armorial bearings or devices solely as trade-marks and in the course of trade." We presume it is from this point of view that they allow the very frequent use of the Pharmaceutical Society's arms or similar devices on business note-paper, prescription-envelopes, &c.

198/24. *Lem*.—A chemist can recover in the County Court for medicine sold and delivered to a customer's order.

MISCELLANEOUS INQUIRIES.

Inquirers will please read the "Memoranda for Correspondents."

For all particulars regarding Educational and Examination matters refer to our issue of September 17, 1892.

Replies to queries are inserted according to the space open in any week, and insertion on any specific date cannot be guaranteed.

Back numbers of our weekly issue, containing formula, &c., occasionally referred to in answers, can be obtained from the Publisher at 4d. each.

181/66. *Nottingham*.—To make 1 minim of Eucalyptus Oil into pill, rub up with 1 grain each of powdered soap and liquorice, and mass with a little treacle.

188/46. *Gossypium*.—We are unable to give you precise particulars, the manufacture of absorbent cotton and antiseptic dressings being largely a specialised industry. Please say which dressings you wish to make.

188/36. *Ex Lacte*.—Artificial Koumiss.—Mix 3vj. of cane-sugar, 5x. of milk-sugar, and 2 teaspoonfuls of brewers' yeast (washed) with 40 oz. of skimmed milk and 10 oz. of water; expose to the air for six hours, then bottle it in Apollinaris-water bottles, tying the corks well down, and keep in a cool place for six days, shaking occasionally. By this time it will have become a pleasant foaming beverage, with a slightly acid taste. After this it becomes gradually unfit as a beverage for the healthy person, but up till the thirtieth day it is a valuable medicinal agent, though unpleasant to drink. In replenishing stock, mix 1 pint of month-old koumiss with 4 pints of skimmed milk and the above proportions of sugars, and bottle.

188/27. *J. A. S.*—Four grains of a morphine salt to 1 oz. of sherry.

188/55. *E. Mackay*.—The doses are quite safe.

188/47. *W. W. (Glasgow)*.—Magenta may be used for colouring raspberry vinegar, and round it off with caramel.

189/4. *Young Pharmacist*.—(1) Lime-juce and Glycerine.—THE CHEMIST AND DRUGGIST, November 28, 1891, page 798. (2) Recently. (3) Malt and Oil.—THE CHEMIST AND DRUGGIST, March 28, 1892, page 465.

189/3. *J. H.*—No modification in the action is likely to take place.

250/90. *J. C. Heron*.—We think the time has hardly come yet to discuss the patent-medicine case and what shall be done next.

191/25. *Oxoniensis*.—You must take the questions on the coupon as you find them. We do not think they are ambiguous, but any attempt to explain them now would be unfair to the competitors who have already sent in their replies.

193/19. *Vigor*.—Adrian's book, "Extraits Pharmaceutiques," is the only one which deals adequately with the manufacture of vegetable extracts on the large scale. It is in French.

193/44. *Cantata*.—Magnesium ribbon might turn out rather expensive to burn for fifteen minutes, but it would be the simplest and one of the most effective means of illuminating a school platform. Next to that the limelight.

18/14. *Inquirer*.—Quinine and iron Tonic.—See THE CHEMIST AND DRUGGIST, July 25, 1891, page 123, and January 30, 1892, page 146.

16/25. *E. B. B.*—Neuralgia and Tic Mixture.—January 30, 1892, page 186.

194/18. *G. D. Coy*.—(1) A penny an oz., with a minimum of 4d., is the usual rate to charge doctors for mixtures. In some cases 6d. is sufficient for an 8-oz. mixture. (2) Try 1 grain of salicylic acid to the oz.

20/30. *Chloride of Ammonium*.—The use of an ammonium-chloride inhaler need not keep a person indoors, as he is not rendered more susceptible of cold afterwards.

194/39. *Jasper*.—Sap-green is a suitable colouring for the purpose. Sulphate of potash may do. Try.

194 40. *Zingib*.—It is now the almost universal practice for wholesale houses to recover spirit from marcs (especially those like ginger) by distillation.

194/56. *Eucalyptus*.—The *Eucalyptus Globulus* has been regarded as that yielding the best essential oil, but within the past year or two it has been ascertained that *E. cineori-folia*, *E. gracilis*, and a few more plants yield oils which are equal to it in antiseptic value, judging of the value by the eucalyptol content. It by no means follows, however, that the antiseptic properties of eucalyptus oil are due solely to eucalyptol. We do not believe that.

189/22. *Inquirer*.—"Extraits" are floral essences or extracts, and the method of making them is described in the 1891 DIARY.

191/6. *The Missing Word*.—Mr. W. D. Calvert writes:—"Will you kindly explain through your journal 'why small pieces when placed in clean water move about as if endowed with life'?" Why are we tempted thus?

812/92. *R. S. L. (Plymouth)*.—Thanks for yours.

Information Wanted.

15/34. Formula for Bate's salve.

25/7. Fry's peppermint cordial: name and address of maker.

193/23. Maker of cards suitable for carding specialities, small packets of dyes, &c.

We hope to find space for Dispensing Notes and analytical and other miscellaneous queries next week.